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Pension World

The Magazine for Plan Sponsors and Investment Managers/A Publication of

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Successful International Investing

State Funds Investing In Real Estate

Legal Framework Of Communications

Ninth Annual Survey Of State Retirement Systems

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Pension World

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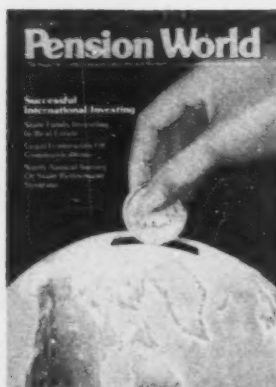
August 1982
Volume 18 Number 8

Features

- Investment: A fundamental approach to international investing** by Clinton J. Kendrick and Glenn Wellman **16**
The key to success in investment in foreign securities lies in carefully plotted asset allocation, say these London-based executives of Alliance Capital Management.
- Real Estate Highlight: Update: Public pension funds and real estate** by Leslie Ellen Wohlman **22**
Are public pension funds expanding more vigorously into real estate? *Pension World* follows up on a 1981 study of 10 of the largest state retirement funds to see what commitments they have made or intend to make in real estate.
- Benefits Communications: Northern States Power sets stage for flexible benefits** by Jerry E. McKinney **27**
Before this Minneapolis-based utility company implemented a flexible benefits program in January, 1981, it took great care to communicate the design of the new plan. The firm's manager of compensation and benefits details how that process worked.
- Investment Manager Profile: Ward & Wissner gears strategy to each plan** by Ronald Derven **30**
The philosophy of this New York City firm is to create for a pension client an investment approach geared to the client's specific objectives. This is accomplished, say the principals, through a combination of bonds, financial futures, and computer sophistication.
- 9th Annual Survey of State Retirement Systems** **35**
Pension World's exclusive analysis of 98 public retirement systems reports on how state portfolios are structured — where the money is invested and who is managing it.
- Pension World Basics: Defined contribution vs. defined benefit plans** by Elinor Merl **66**
Since the passage of ERISA in 1974, activity in the legislative arena has enhanced the popularity of defined contribution plans. A benefit specialist at Citibank reviews the fundamental differences between defined contribution and defined benefit plans.

Departments

Guest Editorial	4	Washington Newsletter	12	Pension News	55
Letters to the Editor	6	Current Issues in		Pension People	60
International Pension World	8	Plan Design	49	Meetings & Conventions	62



Cover: In today's economic climate, international investing has found its place in nearly a third of the nation's corporate pension fund portfolios. A look at a basic approach in using this strategy begins on page 16.

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International Pension World

Survey of private pension plans in the United Kingdom

The National Association of Pension Funds, the largest professional association of pension fund managers in the United Kingdom, recently released the results of its seventh annual survey of occupational pension plans.

The 1981 survey analyzed the responses of 93 pension plans in the public sector and 1,127 pension plans in the private sector. The employers operating these pension plans had an estimated 9.4 million employees, of whom 5.7 million (60 percent) were currently members of pension plans. In addition, there were 2.7 million pensioners and 586,000 deferred pensioners. The Government Actuary's 1979 survey (see *Pension World*, April 1981) estimated that there were some 90,000 occupational pension plans in the United Kingdom with a total membership of about 11.8 million employees and 3.7 million pensioners. However, 79,000 of these plans had fewer than 30 members. Hence, while covering a relatively small proportion of the number of pension plans in the United Kingdom, the National Association survey includes about half the total members of occupational pension plans.

Table I compares the main financial statistics of the pension plans participating in the 1981 survey with those for the previous year.

Survey findings

Income and expenditure and size of fund. It was estimated that the pension plans (excluding insured plans) covered by the survey (with some 5,658,000 members) have funds totaling approximately £48,633 million. The total annual contribution income to all plans was approximately £5,811 million, and the annual pension, lump sum

commutation on retirement, and lump sum on death-in-service or retirement was approximately £3,142 million.

Nature of the pension plans. The survey covered a total of 1,220 pension plans (93 of which were in the public sector). Forty percent of these plans were staff plans, 15 percent works plans, and 45 percent combined plans.

Membership. The survey covered companies with some 9.4 million employees, of whom 5.7 million were members of plans. The total number of pensioners receiving pension benefits from the plans included in the survey was estimated to be 2.7 million. The plans also had 586,000 ex-employees with entitlement to deferred (preserved) pensions.

Investment medium. Sixty-eight percent of plans were privately invested, 15 percent insured, 16 percent insurance-managed fund units. Only 1 percent of plans were unfunded.

Additional plans. Thirty-five percent of companies had a topping-up or separate plans, and 11 percent provided a different benefit scale for their senior staff.

Conditions of entry. Eighty-three percent of plans made membership compulsory; 67 percent of plans imposed a minimum eligibility age of 21 or under, while 59 percent of plans imposed some maximum eligibility age. A minimum period of

service was required by 46 percent of all plans.

Members' contributions. Eighty percent of plans were contributory. Only 2 percent of contributory plans (all works plans) levied members' contributions as a flat rate per annum. Fifty-one percent of plans calculated contributions on basic earnings. The average contribution rate per member where contributions depend on salary was found to be approximately 4.5 percent of pensionable earnings for staff plans, 3.5 percent of pensionable earnings for works plans, and 4.4 percent for combined plans.

Company contributions — contributory plans. The average company contribution rate per member was approximately 12.3 percent of pensionable earnings for staff plans, approximately 7.1 percent of pensionable earnings for works plans, and approximately 10.8 percent of pensionable earnings for combined plans.

Company contributions — non-contributory plans. The average company contribution rate of pensionable earnings per member was approximately 18¼ percent for staff plans, 7 percent for works plans, and 17½ percent for combined plans.

Benefits

Normal retirement age. The majority of plans adhere to normal retirement age of 65 for males and 60 for females.

Normal retirement benefit. Only 3 percent of plans (covering some 120,000 members) calculated benefits on any basis other than final or final average salary. Flat rate plans were restricted entirely to works plans (with a total of 13,000 members).

Final and final average salary.

by **VINCENT J. SIMONE**

Director, Godwins Ltd.
Managing Dir., Hall/Godwins (Overseas)
Consulting Co.
Editor, International Benefits
Information Service (IBIS)
Farnborough, England

Table 1 Financial Comparisons

	1981 (Millions £)	1980 (Millions £)
Estimated market value of funds (excluding Insured Schemes)	46,633	36,860
Estimated annual contribution income	5,811	4,890
Estimated annual pension outlay	1,943	1,752
Estimated lump sum commutation payments (and lump sums on retirement as of right)	897	517
Estimated lump sum death benefits	302	202

"Average salary over the best three consecutive years ending in the last 10 years" was the most frequent definition of salary for pension purposes in plans providing benefits related to salary near retirement.

Integration with social security. Twenty-four percent of plans made some specific adjustment of the amount of pensionable pay on which contributions are paid, and 17 percent of plans made some specific adjustment by offsetting the state pension against the occupational pension. Eighty-four percent of "contracted-out" plans (see *Pension World*, June 1982) gave an accrual rate equivalent to "1/60" (or better) while only 54 percent of "participating" plans did so.

Early retirement (ill health). Ninety-eight percent of all plans provided an immediate pension on a member's retirement on the grounds of ill health.

Death-in-service benefits. Virtually all plans provided at least a widow's pension or lump sum on death-in-service. Ninety percent of plans paid a lump sum as well as a widow's pension. The most common level of widow's pension was equal to one-half the member's pension. The most common level of lump sum benefit was between two and 2½ times salary for both males (married and single) and females. Thirty-one percent of plans provided an automatic widower's benefit if he was a dependent, while 24 percent of plans provided a benefit whether he was a dependent or not. Seventy-two percent of plans provided children's benefits.

Death-in-retirement benefits. Ninety-six percent of all plans gave death-in-retirement widow's pensions as a right. Eighty-seven percent of those plans gave death-in-retirement pensions of one-half the member's pension. Thirty-four per-

cent of plans gave death-in-retirement pensions for dependent widowers, while only 26 percent of plans provided the benefit for an independent widower.

Pension guarantee. Seventy-nine percent of plans provided a pension guarantee. The most common guarantee was five years.

Early retirement (other than ill-health). Ninety-four percent of plans had a provision for employees to retire voluntarily, while only 83 percent of plans had a provision for employees to be retired early at the instigation of the employer. Fifteen percent of plans made additional discretionary payments where retirement was at the instigation of the employer.

Commutation options. Ninety-seven percent of plans provided members with the option to commute part of their pension for a lump sum at retirement, while 88 percent of plans had the facility to commute trivial pensions entirely.

Escalation of pensions. Thirty-

nine percent of plans guaranteed to increase pensions in payment and another 51 percent of plans gave non-guaranteed increases of pensions in payment. The most common rate of guaranteed escalation was between 3 and 4 percent per annum.

Interchange arrangements. Ninety-six percent of plans are able to transfer pension rights to another employer's plan, while 94 percent of plans are able to receive transfer payments.

Additional voluntary contributions. Seventy-eight percent of plans allowed members to make additional voluntary contributions (AVC's).

Social Security Pensions Act

The decision to contract out or to participate in the state plan. Seventy-six percent of plans, representing 93 percent of the total membership of all plans in the survey, have elected to contract out of the state plan.

Treatment of early leavers (amongst contracted-out plans). Sixty-four percent of plans have chosen the fixed revaluation of GMP's. The analysis shows that 75 percent of public sector plans have chosen full revaluation while only 5 percent of private sector plans have done so.

Copies of the complete 58-page survey are available from the NAPF, Sunley House, Bedford Park, Croydon, CRO OXF, England. □

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Update: Public pension funds and real estate

Are public pension funds expanding more vigorously into real estate? *Pension World* first examined this question last fall (October, p. 17) by interviewing the investment managers and gathering information on 10 of the largest state retirement funds in the U.S. To update the 1981 data, interviews with the in-house investment advisors of nine of these systems have been repeated.

The funds represented in these interviews were the Public Employees Retirement Systems of California (PERS), Michigan State Employees Retirement Systems, New York State Common Retirement Fund, New York State Teachers Retirement System, North Carolina Retirement Systems, Public Employees Retirement System of Ohio, Pennsylvania State Employees Retirement Fund, Teacher Retirement

System of Texas, and State of Wisconsin Investment Board. The total assets managed by these systems represent over \$72 billion.

The growing importance of pension funds as a source of real estate financing is primarily the result of a changing economic and legal environment. The impact of unprecedented inflation over the past several years has created an important change in both traditional sources of real estate capital and financing. Life insurance companies and thrift institutions, which have been the major sources of real estate investment funds, historically enjoyed a

relatively predictable positive cash flow. That, however, is no longer the case. Continuing inflation and the high interest rates available from short-term money market instruments have caused a major change in institutional and individual investor sentiment.

Pension funds are today the largest pool of predictable cash flow in the country and thereby constitute the principal (if not the sole) remaining financial institution that can afford lending long. The erratic performance of the credit and equity markets, moreover, has provided a spur to pension fund managers to invest in tangible assets such as real estate, whose value has historically increased more rapidly than the rate of inflation. The enactment of the Employee Retirement Income Security Act (ERISA) in 1974 encouraged portfolio man-

by **LESLIE ELLEN WOHLMAN**
Regional Vice President
Integrated Resources, Inc.
New York, N.Y.

Chart I Asset Diversification — Today

	Calif.	Mich.	N.Y. Common	N.Y. Teachers	North Carolina	Ohio	Penn.	Texas	Wisc.
(Percentage of Total Assets as of 6/30/82)									
Fixed Income									
Federal Government & Agency Bonds	6%	19%	38%	12%	1%	2%	8 %	16%	2%
Corporate Bonds	42	35	16	35	73	54	45.6	14	49
Short-term Investments (Notes, Bills, C.D.'s, etc.)	1	6	5	4	1	16	13.6	2	5
Government-Insured Mortgages	5	20	2	5	1	5	12.7	2	0
Conventional Mortgages	—	1	12	9	—	—	—	5	5
Net Lease Credit Mortgages	2	—	—	—	—	—	—	2	5
Pass-Through Securities, i.e., Ginnie Maes, Freddie Macs	13	2	2	—	7	3	4.5	29	4
Other	—	—	—	3	—	3	—	—	—
Fixed Income as % of Total Assets	69	80	75	68	83	83	84.4	70	70
Equity									
Common Stocks	30	19	25	32	15	17	15.1	30	30
Real Estate	1	1	—	—	—	—	.5	—	—
Other	—	—	—	—	2	—	—	—	—
Equity as % of Total Assets	31	20	25	32	17	17	15.6	30	30
Total Assets (billions)	\$17	\$6.6	\$15.4	\$9.2	\$5.6	\$6.4	\$ 5.6	\$6.9	\$ 5

¹Included in government-insured mortgages.

²Included in Federal government and agency bonds.

agers to diversify their holdings, thus opening the door for more aggressive investment in real estate.

Today's asset diversification

As shown in Chart I, the state funds have invested the majority of their holdings in fixed-income securities, ranging from 68 to 83 percent of their total assets. The largest percentage of the fixed-income securities is in the corporate bond category, followed by pass-through securities (i.e., Ginnie Mae's), then Federal government and agency bonds.

Conventional and net lease credit mortgages constitute an increasing amount of most of the funds' assets. For example, the three largest funds (PERS/California and both New York State funds) have invested significant amounts in mortgages: 11.5 percent of the assets of the New York State Teachers Fund and 9 percent of the New York State Common Retirement Fund are invested in conventional and participating mortgages; PERS/California has been a major investor in credit mortgages, with over \$340 million of these investments in its portfolio.

Equity investments presently consist almost exclusively of common stock holdings. Most of the funds currently do not have significant holdings in real estate equity investments, primarily because of statutory restrictions. By contrast, PERS/California does have the legal authority to make equity investments and over the past year has made substantial commitments to purchase real estate.

Mel Petersen, chief of investments, PERS, expresses his view of fixed-income securities — a response typical of the other advisors:

Fixed-income securities are presently offering a significant premium over the current inflation rate, which has recently abated. Some funds are investing substantial amounts today in real estate equities and common stocks and are not taking advantage of the historically high premiums being offered in fixed-income securities. We have a long-term philosophy and have continued to invest in fixed-income securities.

Most of the states plan to increase significantly their investments in net lease credit mortgages. These investments are based on

Chart II Creative Financing Vehicles Used by the State Pension Funds (1981 Commitments)

1. **Participating Mortgage** — \$40-million participating mortgage on a 400,000-sq. ft. office building — 14 percent coupon plus 35 percent of adjusted gross income above the break-even amount. Strict call provisions include a capitalization of the average last three years of adjusted gross income by 10 percent.

2. **Convertible Participating Commercial Loan** — \$6-million loan on 10 acres of land improved with a 221,952-sq. ft. net rental area industrial building, 12.5 percent coupon plus 50 percent of 1) the net operating income of the property; 2) all refinance proceeds; 3) all sales proceeds; 4) appreciation of the property during the term of the loan. The pension fund anticipates a 16.83 percent internal rate of return on a 15-year *pro forma*, assuming property income increases and property appreciation of 7 percent per annum compounded every five years, and receipt by the system of 50 percent of the property appreciation. 30-year term with a 30-year call protection. The system has an option to acquire 50 percent ownership of the property during the 15th loan year. \$5 million initial funding in May, 1982, and a rental achievement funding of \$1 million no later than May, 1983, providing that the portion of the property is leased to a tenant satisfactory to the pension fund.

3. **Leasehold Participating Mortgage** (Disneyland Hotel, Anaheim, California) — 14.5 percent coupon plus 12 percent of excess gross revenues above \$23 million. The minimum guaranteed return is 16 percent annually; any annual shortfall will be paid out as a balloon payment by 1993. The gross revenues are defined as gross room rentals minus promotional rooms and uncollectibles.

4. **Accruing Mortgage** — \$20-million commercial loan by a first mortgage on land and improvement with an assignment of lease to a credit-worthy tenant. 13 percent coupon in loan years one through 15 with an interest differential of 4 percent per annum accruing each year. The 4 percent accruing in years one through 15 will be paid by the pension fund accepting full payment at the end of the 20th year or the pension fund becoming a 25 percent owner of the subject property.

5. **Credit Net Lease Mortgage** — \$15-million commercial loan secured by five retail stores and land located in the Southwest leased to an A-rated credit tenant. 16.5 percent monthly coupon, 25-year term. Interest only during the first 10 years with monthly payments thereafter to amortize fully the loan during the last 15 years. 12-year call protection with a prepayment penalty of a 5 percent premium declining by ½ percent per year.

6. **Equity Purchase/Leaseback** — \$20-million purchase of a 200,000-sq. ft. office building and six acres of land. Current coupon of 9 percent. Rent and expense stops are adjusted at the end of the fifth and 10th years based on the Consumer Price Index (CPI), with a maximum increase of 6 percent compounded annually. The pension fund expects a 17.5 percent internal rate of return, assuming 6 percent CPI rent adjustment compounded annually and sale of the property at the end of the 10th year.

both the credit worthiness of the tenant and on the intrinsic value of the real estate. Since these vehicles share the characteristics of a corporate bond and mortgage security, they will enable pension fund managers to utilize their financial acumen gained in the stock and bond markets.

Investing in real estate

The pension funds interviewed are slowly and conservatively making real estate investments. However, they are being besieged by requests from the real estate community and perceive real estate today as a market out of kilter. With all these people calling on them, the pension fund managers' belief that now is not the time to take the plunge into real estate is reinforced.

Robert McLaughlin, assistant director/investment officer of the Public Employees System of Ohio, worked diligently over the past few

years to get legislative authority to invest in real estate. However, since last year when the system finally received this authority, that fund has not invested any money in real estate projects. McLaughlin expresses his skepticism:

Why is real estate so popular today? Is it history or future? We feel that the rapid increase in the value of real estate projects that was realized in the '70's may not necessarily be repeated in the '80's. Furthermore, if the present recessionary environment continues, real estate projects might, in fact, decline in value over the next few years.

Kenneth Codlin, executive director of the State of Wisconsin Investment Board, expresses this view:

Real estate investments can help diversify a pension fund's portfolio. During the 1970's when both the stock and bond markets — the traditional investment vehicles of pension funds — gen-

erally did not perform well, good quality real estate generally increased in value. During the '80's, real estate will continue to be a useful diversification tool, even if the stock and bond markets return to a better performance record. An important purpose served by good quality real estate for a pension fund is to secure more consistent investment results under varying economic conditions.

New financing vehicles

As a result of the difficulty for new properties to pay the currently high financing costs during their early years of operation, many new financing vehicles have developed, e.g., participating mortgages, ac-

cruing mortgages, convertible debt/equity. (See Chart II for illustrations.) These new vehicles enable the financial institution to share in the increased cash flow and value of the property over a period of time while the owner/developer pays lower financing costs in the early years. Furthermore, the tax benefits that result from the depreciation of the property are used by the owner/developer or a limited partnership. If the pension fund had been the equity owner, the depreciation benefits would be wasted since pension funds are tax-exempt entities.

The most frequently used financing vehicle by the funds is the participating mortgage — whereby

there is guaranteed a fixed minimum coupon (typically 12 to 14 percent), plus a participation in the adjusted gross income of the property (ranging from 25 to 35 percent of adjusted gross income). This enables the pension fund to share in the increased cash flows from the property with significant upside potential if the leases are renegotiated at increased rental rates. The fund is getting a lower-than-market guaranteed coupon today for what is hoped will be a higher coupon in later years. However, if demand for space in that particular real estate market does not remain strong, the leases could be renewed at lower rates; hence, the anticipated higher coupon may not be possible.

SAN BERNARDINO COUNTY CHOSE GRUBB & ELLIS TO MANAGE THEIR ~~\$20~~³⁰ MILLION* REAL ESTATE INVESTMENT.

WHY?

Excerpts from a conversation with John Leach, Chairman of the Investment Committee, Board of Retirement, San Bernardino County Employee's Retirement Association, regarding the management of the Board's \$30 million real estate investment.

QUESTION: How did you choose between banks, insurance companies, and real estate companies to manage your investment?

LEACH: We interviewed some impressive contenders in financial institutions, but chose a full service real estate company.

These new creative financing vehicles are structured to maximize the economic benefits of the transaction for both the pension funds and developers. Several of the pension funds, however, discussed problems they are encountering.

1. *Time to negotiate.* "These new financing vehicles are so varied and complex that we are spending too much time negotiating how to negotiate in these transactions."

2. *Guaranteed vs. promised rate of return.* "The fixed-rate mortgage is simpler to negotiate and has a guaranteed return. A pension fund should be seeking a guaranteed return to meet its future liabilities, not a promised return."

3. *Complexity of legal and tax issues.* "There are many unclear legal and tax issues that arise when structuring a transaction with these new financing vehicles, such as:

- "Which party takes the depreciation of the property when the pension fund has a conversion option to a partial equity ownership position?"

- "Is there a potential problem for clogging of the equity of redemption in a convertible debt/equity issue?"

- "With a participating mortgage, how does a pension fund participate in the future increases in the cash flow of the property without these additional funds being

subject to an unrelated business income tax?"

The Public Employees Retirement System of California has been a leader in a variety of creative financing vehicles, including participating mortgages, accruing mortgages, and convertible debt/equity. Robert Carlson, president of the Board of Administration for the PERS System, expresses why it has been using these creative financing vehicles:

These new vehicles maximize the economic benefits of the transaction. The public funds are increasing their investment yields, while the depreciation is held by the parties that can use these tax benefits.

Grubb & Ellis, because we wanted a team with experience in the right locations and its own computer data collection network for finding the best properties. We were especially interested in the Sun Belt and West Coast; Grubb & Ellis has offices in these locations, plus the best data bank in those regions.

Also, we were interested in other services such as property management, that Grubb & Ellis could provide at highly competitive prices.

QUESTION: *Were you concerned that they would favor their own divisions, for example, commercial brokerage, contrary to your best interest?*

LEACH: Yes, we thought about that: it comes down to believing in the integrity of the team and in their determination to build a performance track record with you. Also, we felt that a publicly held independent company like Grubb & Ellis had suitably long term goals.

QUESTION: *Did the size of your investment enter into your decision?*

LEACH: We are investing in excess of \$20 million over two years in real estate. The continual re-evaluation and maximization of a real estate portfolio of that size requires not only experienced professionalism but also considerable computerized data management capability: we chose a team that was up to the task.

QUESTION: *What about fees?*

LEACH: Remuneration as a percentage of overall investment did not vary much between companies; however the Grubb & Ellis fee system rewards performance because it is geared to asset appreciation. We felt that was important.

For further information on Grubb & Ellis services for pension fund managers, contact: Terry P. Noyer
Vice President, Property Services Division
Grubb & Ellis Company
1333 Broadway, Oakland, CA 94612
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Socio-political pressures

Current economic difficulties have substantially increased public and political awareness of the nation's pension funds. During the past year, there have been several proposals to redirect the \$750 billion aggregated in the nation's pension funds toward investments that will help solve the country's economic problems. Specifically, some state legislatures have asked their public funds to subsidize the ailing housing industry with below-market-rate loans.

Most of the investment advisors reacted strongly to the question: "What is your investment response to the social and political pressures to help the housing industry financially?" The overall reaction was succinctly answered by one fund's response: "unprintable."

Clark Manning, investment officer of the Teacher Retirement System of Texas, expresses his investment philosophy:

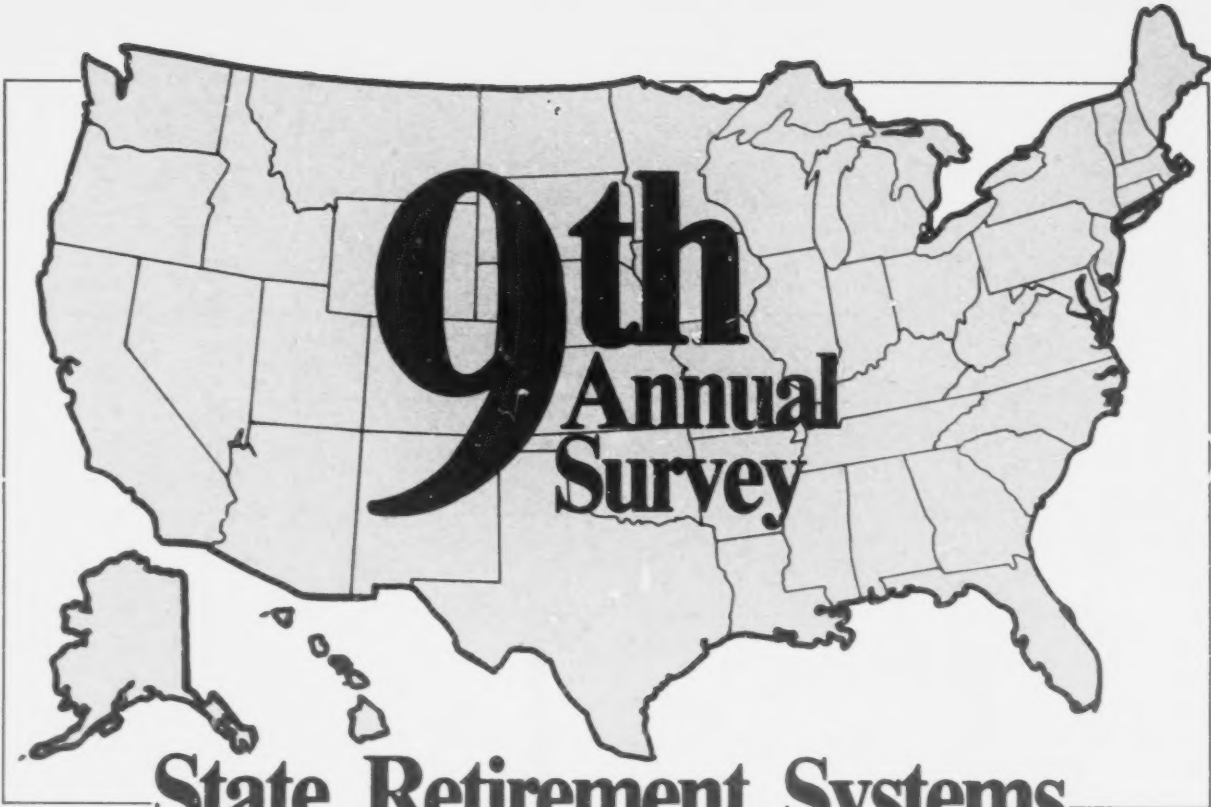
Investments should be viewed on their investment merits for the beneficiaries of the system. Certainly they will have a significant impact on the future well-being of the economy and a residual beneficial social effect. The responsibility of our pension fund is to maximize our investment returns for the retirement benefits of over one-half million people in the system.

Blake Eagle, senior vice president, Frank Russell Co., who is consultant to some of the largest funds in the U.S., says:

The public fund's sole responsibility is to have the assets invested so that they can meet the future liabilities of a retired person's needs. The fund's assets should be invested to maximize the highest possible rate of return at a minimum amount of risk in order to meet those future liabilities.

Conclusion

The investment officers of these nine state funds indicated their belief that public funds generally will be a major source of real estate capital in decades ahead. They view real estate investments as a diversification tool that will help them meet their future financial liabilities under varying economic conditions for the retirement benefits of their members. □



9th Annual Survey

State Retirement Systems

■ Forty-nine states and the District of Columbia are included in *Pension World's* 1982 State Retirement Survey, with a total of 98 public retirement systems. The investment data that follow were compiled from responses to *Pension World's* questionnaire, which was mailed during April, 1982, to the administrators or directors of investment of 102 state systems. Answers received represent a 96.1 percent response rate. The Judges Retirement System of the State of California, District of Columbia systems, Georgia Peace Officers and Sheriffs Retirement Funds, Missouri Local Government and State Employees Retirement Systems, Nebraska School Retirement Fund, New Hampshire Retirement Systems, and Highway Patrol Retirement System of Ohio are new to the universe this year. The following statistics refer to the 87 systems included in both 1981 and 1982.

Last year's data indicated that 26 percent of the state retirement systems reporting had added for the first time or significantly increased their use of external advisors. This trend appears to have leveled off. Despite some changes in the lineup of firms actually handling money for state funds, only six funds report changing the *structure* of their fund management in 1982. Three added non-discretionary investment advisors, one added a discretionary real estate manager, and two dropped their discretionary managers and moved their funds in-house.

With few exceptions, the gains of 20 to 30 percent or more shown by state funds during the past several years also appear to have dropped significantly during the turbulent 1981-82 reporting period. With holdings of each state's funds combined, only five states showed increases, on a dollar-for-dollar basis, of 30 percent or more: Georgia, Minnesota, Missouri, Washington, and Wyoming. Two states increased 20 to 29 percent, 20 states increased 10 to 19 percent, 15 states increased 0 to 9 percent, and 6 states showed a negative return for the period. However, in light of the overwhelmingly negative 1981-82 returns for many published indexes, these overall returns represent a respectable showing for the public retirement sector.

Several points should be noted for accurate interpretation of the following survey.

- All figures are at cost unless otherwise noted and are based on completed responses to the *Pension World* questionnaire.

- Where breakdowns were provided by the state systems, government-insured mortgages are included in the "Mortgage" category and noted as such.

- Because some states included receivables, the value of office equipment, etc., in the figure for "Total Assets" but did not show these miscellaneous items under individual categories, the investment breakdowns for some systems may not add up to the figure given for "Total Assets."

- Where funds are described as "internally administered," any investment advisors listed are non-discretionary unless otherwise noted. Where "discretionary" appears in the listing of advisors, it refers to all firms listed.

- Investments in the "Other" category, where itemized by individual systems, include: gold, convertibles, GIC's, CD's, private placements, foreign securities, Canadians, index fund, government-guaranteed loans, accrued interest, receivables, annuities, venture capital, and ground rent.

Corporate bonds (in millions \$)	Mortgages (in millions \$)	Other real estate (in millions \$)	Cash and short-term securities (in millions \$)	Other (in millions \$)	Reporting date	Investment advisors
1,954.4 (bk.)	45.3 (bk. — private) 859.8 (gov't-backed)		659.6 (bk.)		3/31/82	Mellon Bank (discretionary — stocks and bonds); Fidelity Bank of Philadelphia (discretionary — real estate)
863.3 (mkt.)	217.5 (mkt. — direct) 141.5 (mkt. — mortgage-backed)		260.7 (mkt.)		12/31/81	Mellon Bank, Alliance Capital Management, Miller, Anderson & Sherrerd (discretionary); Philadelphia Savings Fund Society (non-discretionary)
130.5	11.1 (gov't-backed)		74.7		6/30/81	Internal administration
848.3	174.6 (gov't-backed)		318.3	447.1	5/31/82	Internal administration; Jamison, Eaton & Wood, Inc.
			41.1 (mkt.)	849.7 (mkt.)	6/30/81	Internal administration; Eagle Management & Trust Co.
675	75 (gov't-backed)		120		2/28/82	Internal administration; E. F. Hutton & Co.
1,690 (bk.)	65 (bk. — private) 1,408 (bk. — gov't-backed)		109		8/31/81	Internal administration; Thorndike, Doran, Paine & Lewis
485	19 (gov't-backed)	71	148		4/30/82	Internal administration; Capital Consultants, Inc., Eagle Management & Trust, Smoot Knoche & Co., Trust Co. of the West, Value Line Asset Management
9.9	15.1		8.2	25.1	3/31/82	Delaware Investment Advisors, Colonial Management Associates (discretionary)
18	7.5 (private) 2 (gov't-backed)		6.8	13.3	3/31/82	Loomis, Sayles & Co., Brundage, Story & Rose, Colonial Management Associates (discretionary)
389.2 (mkt.)	9.1 (mkt. — gov't-backed)	100.4 (mkt.)	180.5 (mkt.)	108.2 (mkt.)	4/1/82	Bank of New York, Batterymarch Financial Management, Delaware Investment Advisers, MacKay-Shields Financial Corp., Putnam Advisory Co., Fayed Sarofim & Co., Massachusetts Financial Services, Equitable Life Assurance Society of the U.S., Prudential Insurance Co. (discretionary)
1,044	280 (private) 1,096 (gov't-backed)		730	118	5/31/82	Internal administration; Batterymarch Financial Corp., Columbia Management Co., Torrey Clark & Co., Loomis Sayles & Co.
151.0	108.0 (gov't-backed)		91.6		12/31/81	Internal administration; Loomis, Sayles & Co.
2,300	185 (private) 200 (gov't-backed)	15	1,200	200	4/30/82	Internal administration
249.4	33.5 (gov't-backed)		4.6		3/31/82	Internal administration; Alliance Capital Management Corp.

SEPTEMBER 1982

Pension World

The Magazine for Plan Sponsors and Investment Managers / A Publication of Communication Channels, Inc.

9/20/82
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Real Estate Investing by Pension Funds

Cash Crop for
Pension Funds?

Equity Participation
Mortgages

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Fifth Annual Real Estate
Portfolio Manager
Directory

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Pension World

September 1982
Volume 18 Number 9

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

Features

- 1982 Survey: Real estate investing by pension funds** 15
Money Market Directories, Inc., releases its latest data on plan sponsor interest in real estate and looks at the investment trends that may be developing for this vehicle.
- Real Estate: Prospects for pension fund investment in 1982** by Robert L. Kinney 33
The vice president and manager of Institutional Asset Management at Merrill Lynch Hubbard reflects on factors affecting pension fund investment in real estate and the changing roles of open- and closed-end real estate funds.
- Agricultural Real Estate: Cash crop for pension funds?** by William B. Sayre 43
The lack of U.S. pension fund interest in U.S. agricultural property is remarkable considering the historical returns of this sector, says the vice president of Agricultural Property Management at Continental Illinois Bank.
- Investment Manager Profile: Bernstein method requires research and discipline** by Ronald Derven 51
Sanford C. Bernstein & Co., like other money managers, searches relentlessly for investments of value in which to place the assets under its management. The difference is in the firm's methodical, disciplined approach.
- 5th Annual Real Estate Portfolio Manager Directory** 57
Pension World's exclusive listing of real estate portfolio managers includes more than 85 firms currently handling pension funds, plus their returns on investment, fee structures, participation offered, breakdown of investments in real estate, and more.
- 1982 Pension Funds and Real Estate II Conference** 73
As a wrap-up of its second annual conference on pension fund investing in real estate, *Pension World* highlights the assessments of panelists and guest speakers from the two-day June meeting.
- Pension World Basics: Real estate: equity participation mortgages** by Richard T. Garrigan 96
Equity participation mortgages provide some of the advantages of equity ownership together with the preferred return and senior security position of mortgage debt. Here, the author details the general characteristics of EPM's and the role that they can play for pension funds.

Departments

Editorial	4	Current Issues in Plan Design	77	Pension People	87
International Pension World	6	Pension News	83	Meetings & Conventions	90
Washington Newsletter	10			What Every Fiduciary Should Know	92



Cover: Real estate continues to be of interest to pension funds, even though their commitment of asset dollars may not be as great as real estate professionals would like. *PW's* coverage of real estate investing begins on page 15.

Cover Photo: Charlotte Plaza, Charlotte, N.C. Photo courtesy of Trammell Crow Co., Dallas, Tex.

Pension World is published monthly by Communication Channels, Inc., Tim Gold Blyth, Chairman of the Board; B.J. Kotsher, President; Russell Richards, Secretary; John Moebius, Treasurer. Editorial and advertising offices at 6285 Barfield Road, Atlanta, GA 30328. Telephone (404) 256-9800. Telex 4611075COMCHANI. *Pension World* is a registered trademark of Communication Channels, Inc. © 1982 by Communication Channels, Inc. Second class postage paid at Atlanta, GA, and at additional mailing offices. Subscription rates: U.S.A., 1 year, \$37; 2 years, \$62; Canada and Mexico, 1 year, \$40; Foreign Sea Mail, 1 year, \$47; Foreign Air Mail, 1 year, \$77. Single copies, \$3.50. Group rates available. The opinions expressed by authors and contributors to *Pension World* are not necessarily those of the editors or publisher. Articles appearing in *Pension World* may not be reproduced in whole or in part without the express permission of the publisher. Microfilm copies of *Pension World* are available from University Microfilms, 300 North Zeeb Road, Ann Arbor, MI 48106. Postmaster: Please send form 3579 to Circulation Department, *Pension World*, 6285 Barfield Road, Atlanta, GA 30328.

V BPA

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Real estate investing by pension funds

Twenty-six billion dollars in new real estate equity investments will be added to pension portfolios throughout the next three years. This is the largest commitment ever forecast by any of the six real estate surveys that have been conducted by Money Market Directories, Inc., since 1975.

In May, 1982, real estate investing questionnaires were mailed to senior investment officers of 1,200 of the largest corporate and public pension funds, representing \$537 billion in assets. This group comprises 80 percent of total pension assets.

Two hundred fifty-eight questionnaires were returned, a response rate of 22 percent. The 258 respondents have \$138 billion in pension assets and account for 26 percent of the assets among the largest 1,200 funds. These respondents intend to invest \$6.5 billion in equity real estate during the next three years. Based on the above facts, the survey forecasts that the 1,200 major corporate and public pension funds will commit \$26 billion to equity real estate during this period.

The most significant findings of both the 1981 and 1982 surveys are summarized below.

Current Ownership	1981	1982
Number of respondents	205	258
Number of funds owning real estate	90	120
Percentage owning real estate	44%	47%
Total portfolio assets of real estate owners	\$ 40 bil.	\$ 68 bil.
Total real estate owned	\$ 2.3 bil.	\$ 4.4 bil.
Commingled real estate	\$ 1.6 bil.	\$ 2.7 bil.
Direct real estate ownership	\$.7 bil.	\$ 1.7 bil.
Real estate as a percent of portfolio assets	5.8%	6.5%
Average real estate investment per fund	\$ 25 mil.	\$ 37 mil.

Anticipated Purchases During Next 3 Years	1981	1982
Number of funds planning purchases	122	140
Percentage planning purchases	55%	54%
Total portfolio assets of purchasers	\$ 42 bil.	\$103 bil.
Total future real estate to be purchased	\$ 3.2 bil.	\$ 6.5 bil.
Commingled real estate	\$ 1.6 bil.	\$ 1.9 bil.
Direct real estate ownership	\$ 1.6 bil.	\$ 4.6 bil.
Real estate future purchases as a percent of portfolio assets	7.6%	6.3%
Average real estate commitment per fund	\$ 26 mil.	\$ 46 mil.

Some real estate professionals are predicting a slowdown in new real estate purchases by pension funds because of disinflation and the expectation that the current real estate cycle is near its peak. However, the results of the 1982 survey do not indicate that this will occur. The survey results have been reinforced by follow-up telephone conversations with pension officers who stated that they are in the real estate market for the long run and view the current softness in real estate as an opportunity to increase their real estate ownership.

Pension funds have different investment criteria than taxable investors. The only reason for a pension fund's existence is to pay benefits to retired workers over a long period of time in the future. When

The information contained in this survey has been researched, edited, and copyrighted by Money Market Directories, Inc., publishers of the Money Market Directory of Pension Funds and their Investment Managers, the encyclopedia of pension funds with assets over \$700,000 and their investment advisors. Included in Money Market Directories' data base is real estate ownership by all major U.S. pension funds. For further information, contact David Bowerman, Vice President, 300 East Market St., Charlottesville, VA 22901, (800) 446-2810.

this fact is recognized by the real estate industry, it will realize that short-term price fluctuations in real estate will have little effect on the buy/sell decision of pension funds.

Real estate ownership targets. It has been well documented that a few pension funds have decided to reduce their real estate ownership in open-end commingled funds because they are over or near their target for real estate ownership. This has occurred not only because of the strength of the real estate market but also because of the relatively poor performance of the financial equities markets. Both these factors have worked to push real estate investments, as a percentage of total portfolio assets, above some of the target levels set by pension funds. The survey found that as funds approach their real estate ownership target, they do scale back their purchases. However, the majority of funds are not even close to their targets, and real estate purchases will remain at a high level.

By evaluating three separate groups of respondents who currently own real estate, the observations above can be documented as shown in the chart below.

	Current R.E. Ownership			Additional R.E. Purchases Planned		Planned R.E. Target	
	No. of funds	% of Portfolio	\$ Bil.	% of Portfolio	\$ Bil.	% of Portfolio	\$ Bil.
Group 1	57	6.6%	\$1.2	3.4%	\$.6	10.0%	\$1.8
Group 2	24	4.1%	.2	5.5%	.3	9.6%	.5
Group 3	24	2.7%	.4	7.6%	1.2	10.3%	1.6
Summary	105	4.6%	\$1.8 Bil.	5.3%	\$2.1 Bil.	9.9%	\$3.9 Bil.

As can be seen, the lower a respondent's current real estate ownership, the higher the anticipated real estate investment during the next three years. The average target for real estate ownership as a percentage of portfolio assets is currently near 10 percent.

Direct real estate participation. For each of the previous two years, anticipated real estate equity investments were split between direct ownership and commingled funds. This year there has been a dramatic shift toward a preference for direct ownership. Of the \$6.5 billion in new real estate investments in the sample, \$4.6 billion is targeted for direct ownership and only \$1.9 billion for commingled funds.

Most of this increase in the desire to own property directly is the result of public funds becoming more active in the real estate market. Public funds account for \$3.2 billion of the planned \$4.6 billion marked for direct investments.

Last year's survey minimized the intentions of public funds to invest significantly in real estate. Citing state laws that limit many public funds to intrastate purchases and the difficulty of locating sufficient prime property within their locality, the survey concluded that the actual real estate investment of public funds would not be as large as planned. Past surveys had indicated also that while real estate investing intentions were very solid, follow-through was often poor. As the charts below demonstrate, the survey obviously underestimated the state funds' determination.

Current Ownership		1981	1982
Number of public funds owning real estate directly		8	9
Total real estate owned directly		\$77 mil.	\$1,174 mil.
Number of public funds owning commingled funds		1	5
Total commingled fund investments		\$ 8 mil.	\$ 189 mil.
Anticipated Real Estate Ownership		1981	1982
Number of public funds planning to purchase real estate directly		9	11
Total real estate to be purchased directly		\$632 mil.	\$3,158 mil.
Number of public funds planning to purchase commingled funds		5	14
Total amount of commingled purchases		\$245 mil.	\$ 626 mil.

The actual public fund commitment to real estate increased enormously during the past 12 months. The current real estate holdings of the sample group of public funds actually exceed the real estate holdings of all public funds as identified in the 1982 *Money Market Directory*. Clearly, public funds are dramatically increasing their real estate investments.

The fact that these public funds are limited in their ability to participate in commingled funds, which are diversified regionally and nationally, has resulted in most of the present emphasis on direct ownership of real estate to satisfy their investment criteria. However, this may not continue to be the case as more public funds lobby their respective state legislatures to liberalize their investment restrictions and to allow interstate investments in real estate, thus enabling more commingled fund participation.

The other factor for increased direct ownership is a result of the acceptance of real estate as a pension fund investment. Corporate pension fund managers have said that they started with bank and insurance commingled funds because they were relatively easy and safe decisions. The managers knew they could learn about real estate investing and gain knowledge for the future. Now, they are looking for more

direct involvement in real estate by use of a real estate advisor and by having a portion of their real estate managed individually. By investing directly, they plan on increasing their investment return by having a "hands-on advisor" closely manage their real estate portfolio. The portfolio is specifically designed to achieve their fund's investment objective, and they are willing to assume more risk in exchange for a potentially higher return.

Commingled fund participation. Examining the anticipated pension fund investments in commingled real estate funds, one finds a shift in preference for the type of commingled fund sponsor. In past years, the majority of assets directed to commingled funds were flowing to insurance companies, as the chart below indicates.

Anticipated Commingled Investments

1981		Sponsor	1982	
Amount	Percent		Amount	Percent
\$ 324 mil.	20%	Bank	\$ 392 mil.	21%
\$ 890 mil.	55%	Insurance Company	\$ 703 mil.	38%
\$ 405 mil.	25%	Independent Real Estate Advisors	\$ 760 mil.	41%
\$1,619 mil.			\$1,855 mil.	

Independent real estate commingled fund advisors are now receiving slightly more attention than the insurance-company-sponsored funds as the sponsor of choice. Industry sources report this is because large institutions are losing some of their most qualified investment talent to the independent real estate advisors, and pension fund officers have a strong desire for a continuity of management expertise.

The primary reason, we believe, is that pension funds have entered a transitional period similar to what occurred when pension funds moved into financial equities in the sixties to improve their investment return. They turned to their fixed-income managers — the banks and insurance companies — to manage their equity portfolios.

Similarly, the insurance companies and banks were the organizations that first developed the method for pension funds to invest in real estate. They were experienced in real estate investing, and the pension funds had confidence in them because of their past fiduciary relationship with them in stock and bond management.

Now, real estate ownership has been accepted by many pension funds, and independent real estate portfolio managers have developed a track record of success and proven themselves as fiduciaries. Therefore, the current diversification among all types of commingled fund sponsors seems only natural.

Real estate financing. Much has been said about the real estate industry being short of long-term capital and about pension funds becoming its major supplier. It is estimated that between \$100 billion to \$200 billion will be required annually to finance real estate development throughout the 1980's. The information below provides an indication of how much capital pension funds will be willing to supply at today's rates of return.

Mortgages & Financing

Current			Anticipated Next 3 Years	
1981	1982		1981	1982
\$1,678 mil.	\$2,757 mil.	Conventional Mortgages	\$ 366 mil.	\$ 428 mil.
\$ 106 mil.	\$1,063 mil.	Equity Participation Mortgages	\$ 486 mil.	\$ 578 mil.
N/A	\$ 821 mil.	Income Participation Mortgages	N/A	\$ 184 mil.
\$1,279 mil.	\$3,899 mil.	Mortgage Securities	\$ 203 mil.	\$ 430 mil.
\$ 56 mil.	\$ 66 mil.	Construction Loans	\$ 35 mil.	\$ 330 mil.
\$3,137 mil.	\$8,606 mil.		\$1,090 mil.	\$1,950 mil.

Pension funds will continue to supply a substantial amount of capital to the real estate market but certainly not as much as the real estate industry hopes.

A recurring theme in conversations with fund managers is that with today's mortgage instruments, there is no premium paid for risk. Corporate bonds and guaranteed investment contracts offer nearly the same returns to the fund sponsor as do mortgages.

Pension funds are unwilling to assume the higher risks of real estate financing without a significant increase in return. Some real estate professionals have already learned this and have started packaging very attractive participating mortgages for pension funds. For example, one fund negotiated a mortgage that will return to it 50 percent of the increase in the building's equity above the construction cost, 50 percent of the net cash flow, and a 13 percent fixed interest rate on the permanent financing it will provide after the building is 75 percent leased.

It is the challenge of the real estate industry to understand pension fund investment requirements and to continue to develop better products that control the administrative and legal costs of financing and share more of the potential investment return with the pension funds.

The future. The prospect for future pension fund investments in real estate is excellent. Total pension assets are growing at a rate of 15 to 20 percent annually, and by 1995 they will total some \$5 trillion. Today's pension fund investment officers were asked how they think those assets will be invested 13 years from now. They believe that 16 percent, or \$800 billion, will be invested in real estate — mortgages, equity, or commingled funds.

Projected Estimates for 1995

1981 Survey		1982 Survey	
\$ in Billions	Percent	\$ in Billions	Percent
N/A	N/A	Cash	\$ 450 9%
\$2,450	49%	Equities	\$2,250 45%
\$1,150	23%	Fixed Income	\$1,100 22%
\$ 250	5%	Mortgages	\$ 200 4%
\$ 300	6%	Real Estate Equity	\$ 300 6%
\$ 300	6%	Real Estate Commingled Funds	\$ 300 6%
\$ 300	6%	International Investments	\$ 250 5%
\$ 100	2%	Venture Capital	\$ 100 2%
\$ 50	1%	Collectables and Precious Metals	—
\$ 100	2%	Other	\$ 50 1%
\$5,000	100%	\$5,000	100%

The actual results of our 1982 real estate survey are presented in the following tables.

Do you regard real estate equity investments as an effective inflation hedge?

	1975	1976	1977	1980	1981	1982
Yes	80%	62%	67%	86%	83%	83%
No	15%	36%	29%	8%	11%	13%
Did not answer	5%	2%	4%	6%	6%	4%

Do you regard real estate equity investments as being capable of contributing consistency to your fund's performance?

	1975	1976	1977	1980	1981	1982
Yes	71%	59%	59%	77%	83%	79%
No	23%	39%	37%	18%	10%	17%
Did not answer	6%	2%	4%	5%	7%	4%

What would you regard as the minimum acceptable net cash yield to the fund from real estate equity investments?

	1975	1976	1977	1980	1981	1982
Specified a minimum of 7%	5%	17%	21%	11%	18%	9%
Specified a minimum of 8%	20%	15%	18%	13%	20%	20%
Specified a minimum of 9%	22%	15%	17%	14%	11%	10%
Specified a minimum of 10%	17%	21%	17%	17%	19%	20%
Specified a minimum in excess of 10%	13%	13%	9%	21%	26%	28%
Did not answer	23%	19%	18%	24%	6%	13%

What would be your minimum expectation for annual appreciation from real estate equity investments?

	1975	1976	1977	1980	1981	1982
Identified 2% appreciation as the minimum acceptable rate	23%	12%	9%	3%	1%	1%
Identified 3% appreciation as the minimum acceptable rate	26%	18%	12%	4%	5%	7%
Identified 4% appreciation as the minimum acceptable rate	16%	9%	6%	6%	8%	11%
Identified 4+ % appreciation as the minimum acceptable rate	17%	37%	48%	66%	70%	73%
Identified 6+ % appreciation as the minimum acceptable rate	—	—	—	—	46%	46%
Identified 8+ % appreciation as the minimum acceptable rate	—	—	—	—	32%	30%
Did not answer	14%	23%	21%	21%	14%	19%

A recent change in the tax laws allows pension funds to purchase mortgaged income-producing property and to mortgage property themselves without incurring an unrelated business tax. Will this fact increase the likelihood of your fund's purchase of real estate?

	1981	1982
Yes	18%	11%
No	74%	81%
Did not answer	8%	8%

Has your fund purchased real estate equity by participating in any of the following vehicles?

	1981	1982
Direct purchase	8%	11%
Limited partnership	4%	3%
General partnership	1%	5%
Corporations	2%	1%

Has your fund participated in direct real estate investment utilizing the management expertise of an outside real estate counselor?

	1981	1982
Yes	9%	8%
No	83%	84%
Did not answer	8%	8%

If yes, with what type of an organization?

	1981	1982
Insurance Company	26%	14%
Bank	26%	24%
Investment Banker	10%	10%
Developer	5%	14%
Independent Real Estate Management Firm	26%	48%
Broker or Realtor	21%	—
Other	—	10%

What do you regard as an acceptable management fee for your fund's participation in direct real estate investment utilizing an outside real estate investment counsel?

	1981 ¹	1982 ²
½ of 1% annually of real estate under management	—	44%
¼ of 1% annually of real estate under management	36%	39%
1% annually of real estate under management	39%	11%
1¼% annually of real estate under management	18%	6%
1½% annually of real estate under management	—	—
2% annually of real estate under management	7%	—

¹Based on 19 responses.

²Based on 18 responses.

How do you value the real estate in your portfolio?

	1981 ³	1982 ⁴
At cost	30%	26%
By replacement cost	7%	13%
By income-appraisal — capitalizing the value of the income flow	41%	26%
Comparable property sale	7%	22%
All of the above	15%	13%

³Based on 27 responses.

⁴Based on 38 responses.

What do you regard as an acceptable management fee for your fund's participation in institutionally sponsored pool-type real estate vehicles?

	1981 ⁵	1982 ⁶
½ of 1% annually of real estate under management	—	19%
¼ of 1% annually of real estate under management	25%	22%
1% annually of real estate under management	59%	45%
1¼% annually of real estate under management	15%	13%
1½% annually of real estate under management	1%	1%

⁵Based on 72 responses.

⁶Based on 90 responses.

Does your fund intend to purchase new real estate investments during the next three years?

	1981		1982	
	Number	Percent	Number	Percent
Yes — Direct Ownership	38	18%	50	19%
Yes — Commingled	89	43%	110	43%
No — Direct Ownership	167	82%	208	81%
No — Commingled	116	57%	148	57%

The direct ownership of real estate equities is distributed among property types as follows:

Type	Current Ownership ⁷		Planned — Next 3 Years ⁸		
	Amount (in mil.)	Percent	Amt. Purchased (in mil.)	Amt. Developed (in mil.)	Percent
Office Buildings	\$ 606	36%	\$1,579	\$ 430	43.0%
Hotels	5	—	173	20	4.5%
Apartments	40	2%	266	21	6.5%
Industrial	140	8%	675	74	17.0%
Small Shopping Centers	92	6%	248	—	5.0%
Medium Shopping Centers	95	6%	346	29	8.5%
Large Shopping Centers	101	6%	279	40	6.5%
Warehouses	69	4%	180	127	7.0%
Agriculture Land	23	1%	10	1	—
Not Specified	529	31%	106	—	2.0%
Current Total:	\$1,700		\$3,862	\$ 742	

Total Additional: \$4,604

⁷Response Group composed of: 26 corporation funds owning \$526 million in real estate; 9 government funds owning \$1,174 million in real estate.

⁸Response Group composed of: 39 corporation funds planning new real estate purchases of \$1,446 million; 11 government funds planning new real estate purchases of \$3,158 million.

Commingled ownership of real estate is distributed among different type fund sponsors as follows:

Fund Sponsor	Current Ownership ⁹		Planned — Next 3 Years ¹⁰	
	Amount (in mil.)	Percent	Amount (in mil.)	Percent
Bank Commingled	\$ 440	16%	\$ 392	21%
Insurance Commingled	1,856	68%	703	38%
Other Common Trust Funds	445	16%	760	41%
Current Total:	\$2,741		Total Additional:	\$1,855

⁹Response Group composed of: 98 corporation funds owning \$2,552 million in commingled; 5 government funds owning \$189 million in commingled.

¹⁰Response Group composed of: 96 corporation funds planning new commingled purchases of \$1,229 million; 14 government funds planning new commingled purchases of \$626 million.

Has your fund participated in real estate development?

	1982
Yes	4%
No	90%
Did not answer	6%

If yes, did your fund develop the property alone or with other organizations?¹¹

	1982
Alone	22%
With Others	78%

¹¹Based on 9 responses

If with others, please indicate the types of organization.¹²

	1982
Insurance Company	14%
Developer	43%
Independent real estate management firm	29%
Other pension funds	43%

¹²Based on 9 responses

Of the 50 funds intending new direct real estate purchases, 17 funds plan to develop \$742 million worth of property. We asked the 17 funds that were planning property development if they would act alone or with others.

	1982
Alone	12%
With others	88%

Those planning to develop property with others indicated their partners as follows:

1982
40% Insurance Company
13% Bank
— Investment Banker
33% Developer
33% Independent Real Estate Management Firm
— Broker or Realtor
40% Pension Funds

Which of the following investments do you classify as real estate?

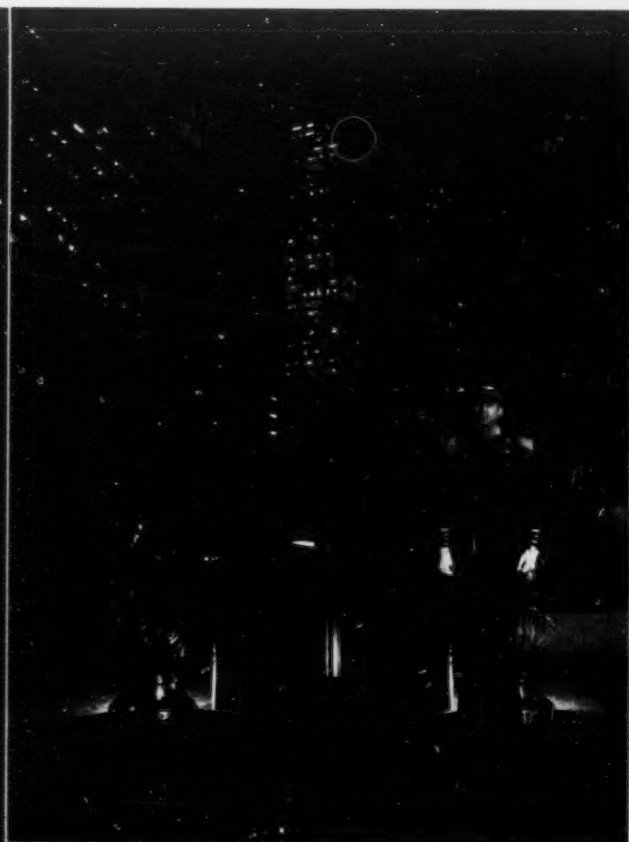
	1981	1982
Classified <i>Mortgages</i> as real estate	23%	33%
Classified <i>Equity Participation Mortgages</i> as real estate	67%	69%
Classified <i>Income Participation Mortgages</i> as real estate	N/A	48%
Classified <i>Mortgage Securities</i> as real estate	26%	22%
Classified <i>Construction Loans</i> as real estate	23%	23%
Classified <i>None</i> as real estate	16%	18%

Two relatively new concepts in mortgage financing for home ownership are the Variable Rate Mortgage and the Shared Appreciation Mortgage (SAM). Assuming you were able to purchase either in a pooled package, which would you prefer?

	1981	1982
Preferred a SAM	54%	41%
Preferred a Variable Rate	28%	30%
Did not answer	18%	20%

Would you choose either of them over a conventional pooled mortgage package?

	1981	1982
Yes	52%	32%
No	23%	36%
Did not answer	25%	32%



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Cash crop for pension funds?

The agricultural segment of the U.S. economy has proven to be a good investment. Should U.S. pension funds begin to pay closer attention to farmland?

Total farm assets on January 1, 1982, were estimated to have reached \$1.77 trillion. Of this, \$895 billion represented privately owned (nongovernment) farm and ranch real estate. In sharp contrast to the United Kingdom (where the typical pension fund has 5 to 10 percent of its assets in English farmland), this substantial segment of the U.S. economy has received little attention from U.S. pension funds.

The failure to seek out means for investing pension funds into U.S. agricultural properties is even more surprising when the returns to farmland owners over the past 15 years are examined.

According to a U.S. Department of Agriculture (USDA) study (Figure I), the rates of return received as current income are similar for stocks, bonds, and farm assets, with common stocks showing the lowest return and farm assets the most variation. Figure II shows how farmland investment would have performed compared to the Dow Jones common stock index. In terms of capital appreciation, farm assets provided the greatest increase and the most stable rate of gain. In combined return, farm assets have produced the best results with the least volatility. While the validity of these comparisons is often challenged, the findings of this study have been confirmed by various other private studies.

For example, data compiled by the University of Illinois from the records of 495 central Illinois grain farms show that, in 1981, the operators of the top third had an average net income of \$39,063 while

the lowest third had an average net income of \$3,212. The USDA study also has been criticized on the grounds that it is inappropriate to combine appreciation on an illiquid asset (real estate) with current income in an analysis of the returns. This concern is alleviated when the comparison is made with real capital gains (gains adjusted for inflation). These are real increases in asset values and are a real return, as is current income.

Farmland prices consistently ex-

ceeded the rate of inflation for many years prior to 1980. This is not surprising considering the steadily improving productivity of U.S. agriculture (see Figure III). As new technology, equipment, and skilled labor have been applied, returns have increased with a portion accruing to the land and being capitalized into higher land values.

Available agricultural land

Another major factor contributing to increasing farmland values has been greater demand domestically and abroad for agricultural products produced from a fixed land base and a constant or diminishing supply of water for irrigation. While some additional water is being made available for irrigation each year, a net decrease must be anticipated due to declining aquifers, increasing energy costs for pumping, and transfer of present water supplies to urban uses.

The USDA has established seven broad classifications of soils in the United States. These are classified on the productive capability and the limitations in the use of the soils and the need for special practices to overcome these limitations. The limiting factors may be such things as the risk from erosion, drought, flood or low fertility, alkali conditions, or physical limitations on the use of the soil for a particular type of production.

Class I soils have few limitations that restrict their use. These are the fertile soils that are adaptable to the production of many crops and are all tillable land. Class II soils have some limitations that reduce the choice of crops that may be



by **WILLIAM B. SAYRE**

Vice President
Agricultural Property Management
Trust and Investment Services Dept.
Continental Illinois National Bank
and Trust Co. of Chicago
Chicago, Ill.

Figure 1 Rates of Return to Stocks, Bonds, and Farm Assets, Selected Periods (1950-79)

Period	Current Income			Real Capital Gains			Total		
	Common Stock	Long-Term Bonds	Farm Assets	Common Stock	Long-Term Bonds	Farm Assets	Common Stock	Long-Term Bonds	Farm Assets
1950-54	5.85	2.61	4.95	11.95	-1.69	3.28	17.53	0.92	8.23
1955-59	3.94	3.38	3.18	13.12	4.65	4.02	17.06	-1.27	7.19
1960-64	3.20	4.00	3.61	7.45	1.49	2.42	10.65	2.61	6.02
1965-69	3.18	5.01	4.46	1.61	-9.09	2.48	4.79	-4.08	6.94
1970-74	3.47	6.25	6.26	-8.66	-8.65	6.15	-5.19	-2.40	12.41
1975-79	4.68	7.49	4.50	-4.09	-12.06	5.10	0.59	-4.57	9.60

Source: ESS/USDA.

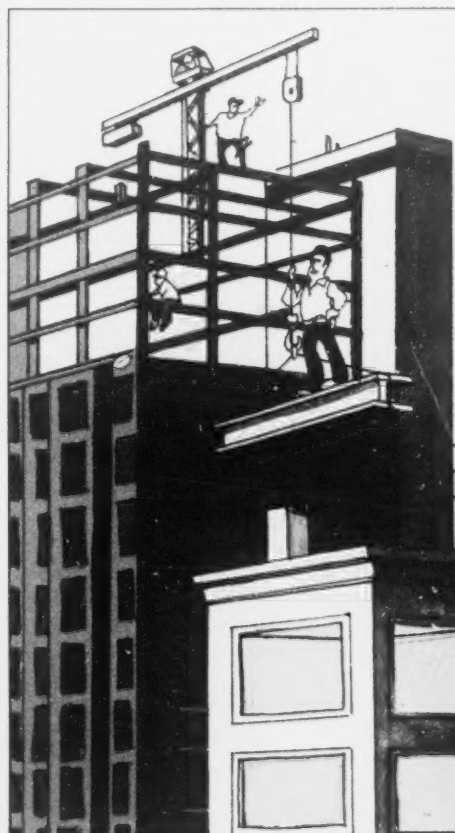
planted or that require specific conservation practices. Class III soils have severe limitations for the production of cultivated crops and must be given special treatment in order to protect the soil from erosion. Class IV soils have very severe limitations and limited options in regard to crop production. The Classes V, VI, and VII are not suitable for crop production and, depending on the topography and natural rainfall, may only be used for pasture, woodland, or wildlife.

The total amount of arable land in the U.S., as identified by the

1977 National Resource Inventory, is approximately 360 million acres. While an additional 100 million acres could be placed in production, it is presently marginal under the current relationship between production costs and commodity prices. If demand for agricultural commodities increases to a point that justifies bringing this marginal land into production, that land that has the natural economic advantage will become increasingly profitable and will reward its owners with higher net current income and real capital gains.

The question, then, is what type and quality of farmland should be considered for a pension fund asset? Class I farmland is strongly recommended, because to receive the USDA classification, a soil must meet standards of quality, productivity, fertility, permeability, drainage, slope, and other factors.

To put it more simply, Class I farmland is analogous to a AAA-bond or AA-bond rating. Primary reasons for selecting Class I land are low risk, strong demand for leasing, and increasing demand for agricultural products, which causes



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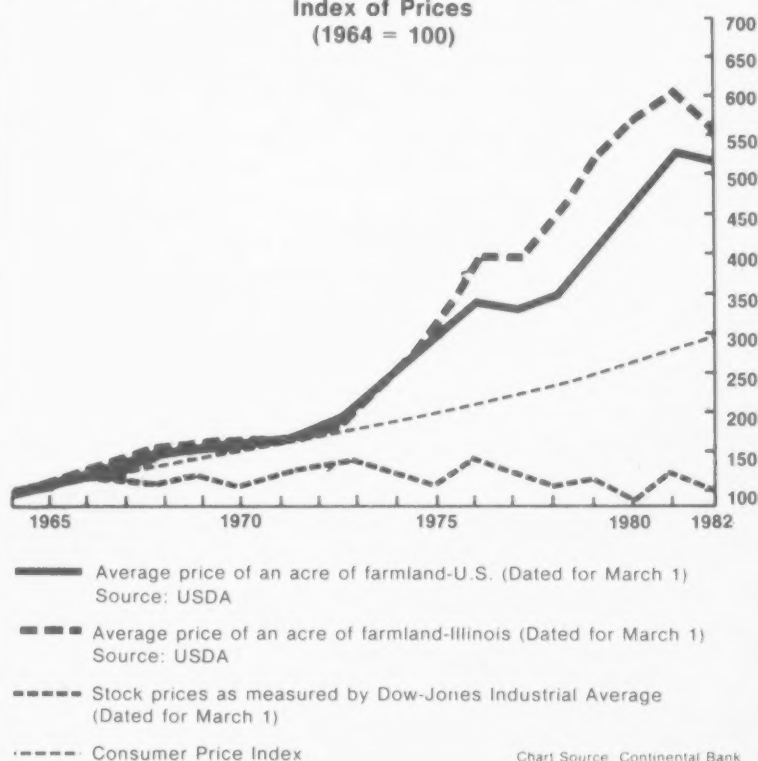
land with the greatest economic advantage to show the greatest increase in income and real capital gain.

Consideration also should be given to acquiring land with few buildings, other depreciable improvements, or permanent crops such as trees or vines. A qualified retirement plan that meets the requirements of Code section 401(a) defers the employee's tax liability on income received by the trust until distributions are made. Therefore, the tax savings to current taxpayers are lost when the asset is owned by an employee benefit plan fund. However, a long-term leasing arrangement may be entered into that will enable the lessee to own the depreciable assets.

A second reason for avoiding property with depreciable assets is that taxpayers seeking tax shelters in the market are bidding up the price on properties where tax benefits can be realized. This is particularly true under the new Accelerated Cost Recovery System rules.

A third and very compelling consideration when dealing with depreciable assets such as center pivot ir-

Figure II Farmland vs. Stocks as an Investment
Index of Prices
(1964 = 100)



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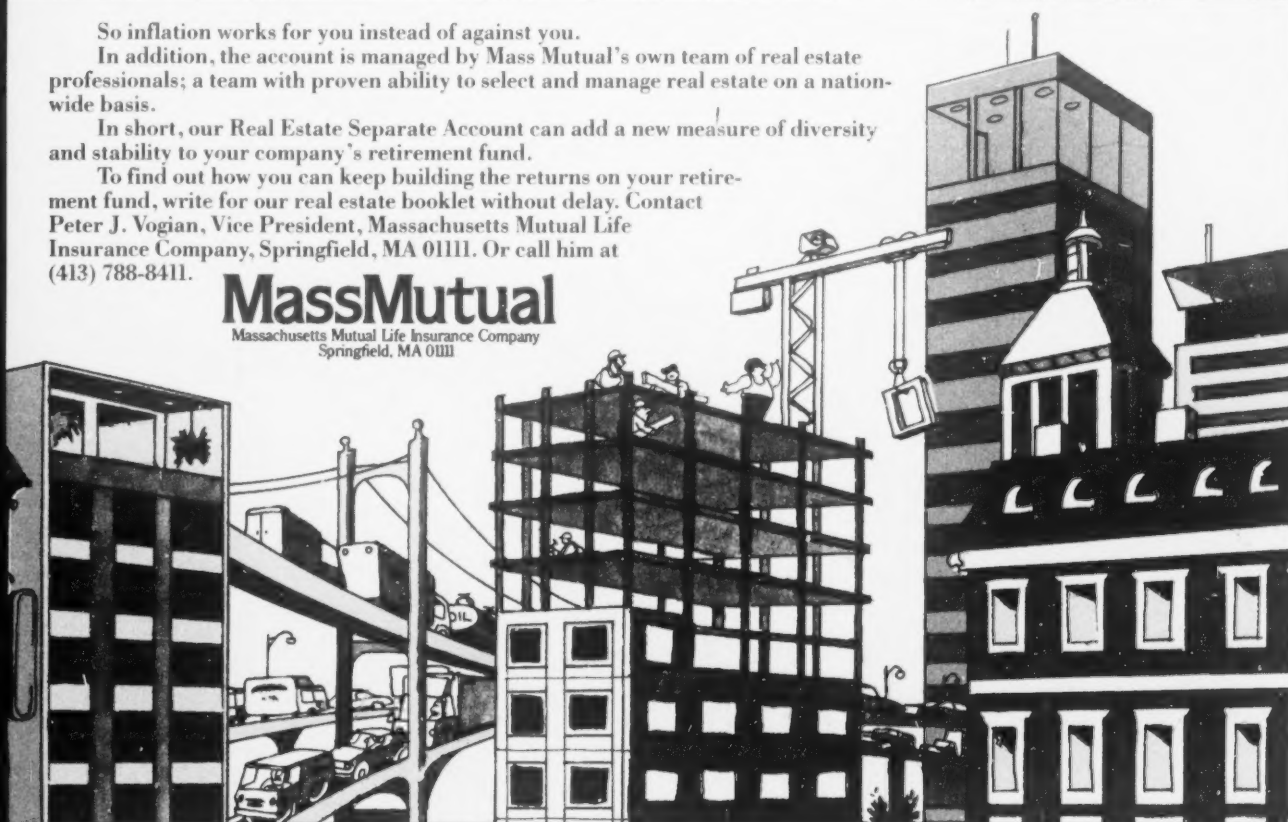


**Figure III
Average Annual
Productivity Growth
in Agriculture
(1950-79)**

Period	Land	Labor
1950-59	2.32%	7.35%
1960-69	1.91	6.92
1970-79	2.50	7.22

Source: USDA.

rigation systems, grain handling equipment, confinement livestock feeding facilities, and other similar

items is that the depreciation is real. These assets must be replaced at some future date with the result that a portion of the equity invested in this manner vanishes. This offsets the appreciation that is accruing to the land.

Evaluating the investment

Recognizing the wide variation in returns that may be obtained even from high quality land, guidelines are needed for evaluating the potential investment. The data required and the analysis of Class I farmland is simple and straightforward.

ward. The analysis of Classes II, III, and IV lands and development projects can become quite complex. The critical concern is that the data be obtained from competent and credible sources.

Skilled and experienced advisors and rural appraisers can analyze a farm property in detail. Such an analysis should include an inventory of resources, soil and water data, crop history, market analysis, income projections, and other pertinent information. This should be supported by USDA data, U.S. geological surveys, and extensive site research. In selecting an agricultural advisor, a pension fund trustee can demand the same high standard of performance as would be expected of a manager for a stock or bond portfolio.

Past performance and peer recognition are indicators for selecting an advisor or manager for a farmland portfolio. The American Society of Farm Managers and Rural Appraisers is the professional organization in the U.S. for this type of specialist. This organization awards the titles of Accredited Farm Manager and Accredited Rural Appraiser. These designations go only to those individuals who meet rigid standards of training and experience, pass comprehensive examinations, and comply with high ethical standards.

In making a farmland investment, a major determinant in selecting the best approach for a specific employee benefit plan will be the amount to be invested. A minimum of 10 percent of the fund's assets should be targeted for real estate, if the investment is to have an impact on the overall performance of the fund. If this targeted amount is \$5 million or more, investing directly in farmland property is recommended. Among the advantages of direct investment are direct control over the purchase, management and eventual sale of the property, elimination of the evaluation problems related to monies being added or withdrawn from the pool by other investors, and an increased ability to diversify the total portfolio and thereby to control the risk more effectively.

Diversification can be readily achieved with a \$5 million investment in farmland. Diversification of the farmland portfolio might include a mix of Cornbelt, California

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(or Rio Grande Valley), and the Mississippi Delta areas, which gives a combination of different climates, crops, markets, and labor supplies. It is important to remem-

Grape producers and many vegetable growers had their best years in 1981, and low feed grain prices are combining with a surge in hog and cattle prices to return these to profitable levels. The U.S. enjoys a strong competitive advantage in world food production due to high rates of productivity that result from the combination of climate, soils, technology, equipment, management, and a skilled labor force.

ber that farmland prices are a function of net profits per acre; therefore, the ability to produce increasing net rental income over time is important not only to cash flow, but to future appreciation as well. Being positioned where rents are determined by world market crops (e.g., corn, soybeans, rice) as well as by domestic market crops such as fresh vegetables, citrus, and grapes provides an ideal blend.

Generally, if the funds targeted for farmland by the plan sponsor are less than \$5 million, the advantages of such diversification can best be obtained by some pooling method.

Farm owners now are welcoming cash buyers as a way to bring needed capital back into agriculture. Faced with high interest rates for operating loans, many farm owners are monetizing their positions by selling some of their farmland on a sale/leaseback arrangement. When leasing the land back long term, the farmer is able to raise cash, which reduces interest expenses and allows him to retain control of the land. This practice is commonly used by businesses outside of agriculture.

Current and future outlook

Recognizing that farmland is a segment of the economy where excellent opportunities have been largely overlooked in recent years, the questions, "What is happening now?" and "What does the future hold?" must be asked. The agricultural sector of the economy is suffering in the current recession, as are most other sectors. Bumper crops were produced in 1980 and 1981. The Carter embargo and Reagan's sanctions on grain exports to Russia and Eastern Europe, along

with the strengthened dollar and import restrictions in the Common Market and Japan, have all combined to back up the export pipeline. The resulting price drop in major commodities (corn, soybeans, cotton, wheat, and rice) has been reflected in lower land prices. The USDA reports that for the 14-month period ending April 1, 1982, farmland prices declined 1 percent nationally. This was the first decline since 1953. This is not a bad record, particularly in the context of what is occurring in the balance of the U.S. and world economies.

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The outlook is encouraging for agriculture. Grape producers and many fresh vegetable growers had their best years in 1981. Low feed grain prices are combining with a surge in hog and cattle prices to return these livestock enterprises to profitable levels. The U.S. enjoys a strong competitive advantage in world food production due to high rates of productivity. This is the result of the combination of climate, soils, technology, equipment, man-

agement, and a highly skilled labor force.

Foreign demand for U.S. agricultural products will continue to be a dominant factor in the 1980's. Presently the production from one out of every 3.5 acres and 28 percent of all marketings goes into foreign trade. This trade has been expanding at a rate of 2.8 percent annually for the past three decades. Worldwide per capita income has been expanding at 3 percent per

year, resulting in a 1 percent annual rise in demand for food. The high-growth developing countries of the world, with a combined population of 600 million people, will be increasing the quantity and quality of

Given the world demand/supply situation, America's Class I farmland appears to be one of the outstanding, non-depletable natural resources in the world. The present downtick in U.S. farmland prices may offer the best "buying window" that will occur for years to come. No one can predict how long this opportunity will exist or how dramatic the ensuing turnaround may be.

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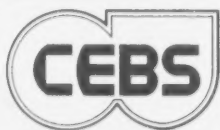
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their food demands during the 1980's.

The USDA, in its review of prospects for the 1980's (ESS-AFPR-4), summarizes: "The 80's will be a decade of serious global adjustments—to record or near record growth in demand, to slower growth in production, and to increased dependence on the United States as a source of supply."

Given this world demand/supply situation, America's Class I farmland stands out as one of the outstanding, non-depletable natural resources in the world. The present downtick in U.S. farmland prices may offer the best "buying window" that will occur for years to come. No one can predict how long this opportunity will exist or how dramatic the ensuing turnaround may be.

One fact is certain—the world supply of food rests in a fragile balance. The persistent farm surpluses of the 50's and 60's vanished within a few months with the "grain drain" of 1972. Because of America's position as the major supplier of food in the international market, farmland in the U.S. is recognized as one of the most secure investments in the world. □

5th Annual Real Estate Portfolio Manager Directory



■ The following *Pension World* Real Estate Portfolio Manager Directory lists firms that provide real estate portfolio management services for pension funds. It is not an exhaustive list, but rather identifies the firms that responded in full to *Pension World's* questionnaire. Only those firms indicating they currently manage real estate portfolios for pension funds are included.

During June, 1982, the questionnaire was mailed to 525 firms throughout the U.S. and Canada that provide some form of real estate services. The response rate was 19.4 percent, with 86 of those firms — including 62 from last year's Directory — meeting the criteria.

The number of firms offering real estate portfolio management to pension fund managers still appears to be growing, though at a slower pace than in recent years. Using the same criteria as last year, the 1982 Directory increased in size by 11 percent, compared to a 24 percent jump from 1980 to 1981. Similarly, less than half a dozen firms responded this year that they are in the process of instituting new funds or expanding their services to include pension fund clients, compared to 14 firms last year.

The gap is widening between the firm with the smallest amount of pension fund assets under management and the firm with the largest. The number of pension fund clients under real estate portfolio management by any one firm ranges from 1 to 7,000. The smallest portfolio of pension fund real estate assets is \$1.5 million; the largest is \$16 billion. Seven firms are managing more than \$1 billion in pension funds assets, compared to four in the 1982 Directory.

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
ACKERMAN ADVISORY ASSOCIATES 3340 Peachtree Road, NE, Suite 111 Atlanta, GA 30026	Brian Bash President 404/262-7171	\$280	6	\$280
ACQUEST CAPITAL MANAGEMENT CO. 555 South Woodward Avenue, Suite 606 Birmingham, MI 48011	James Collins Chairman 313/645-5130	Approx. \$25	15	Approx. \$25
AETNA LIFE & CASUALTY CO. 151 Farmington Avenue Hartford, CT 06156	James W. Tiney Assistant Vice President 203/273-6951	\$1,050	151	\$1,050
ALDRICH, EASTMAN & WALTCH 234 Congress Street Boston, MA 02110	Mosale E. Gross Associate 617/542-9300	\$76.4 (6/1/82)	6 ¹	\$68 ¹ (6/1/82)
ALSTER INTERNATIONAL 919 Third Avenue New York, NY 10022	Bruce Ginsberg Vice President/Acquisitions 212/888-7965	\$150	3	\$150
AMERICAN PRINCIPALS FINANCIAL CORP. 2262 Carmel Valley Road Del Mar, CA 92014	Robert J. Metcalf Senior Vice President/ Institutional Services 714/481-3131	\$46.1	141	\$5.1
AMERICAN SUNBELT PROPERTIES 501 Park Avenue North Winter Park, FL 32790	Donald Culler President 305/629-1085	\$50	3	\$6
AMINOFF & CO. 9601 Wilshire Boulevard #220 Beverly Hills, CA 90210	Gary A. Aminoff President 213/858-6700	\$125	3	\$30
THE BALCOR CO. 10024 Skokie Boulevard Skokie, IL 60077	Donald L. Fortunato Vice Chairman 312/677-2960	\$1,500+	Approx. 7,000	Approx. \$185
BANK OF AMERICA P.O. Box 37026 San Francisco, CA 94137	Richard Clark Vice President 415/622-3103	\$251.3	216	\$91.5
BANKERS LIFE CO. 711 High Street Des Moines, IA 50307	Ronald E. Keller Vice President/Pension Investment Services 515/247-5192	\$12 (separate account), \$475 (general account)	2 in separate account	\$12
THE BOSTON CO. REAL ESTATE COUNSEL One Boston Place Boston, MA 02106	Robert A. Radiotti President 617/722-7102	\$240	2	\$200
R. M. BRADLEY & CO. 250 Boylston Street Boston, MA 02116	Richard P. Brown Senior Vice President 617/421-0714	\$550	2	\$250

¹Exclusive of closed-end fund for pension funds offered through State Street Bank.

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Income-producing property — \$263 million; mortgages — \$17 million	Units in commingled closed-end fund; separate account	National	\$2 million for separate account	11-15%	Varies according to client and fund
100% non-leveraged equity interests in high technology, R&D, light industrial facilities	Limited partnership interests	Primarily Michigan	\$250,000	Not available	1/2-1.2% of invested assets per annum
Income-producing property — 80.8% convertible or participating mortgages — 19.2%	Units in open- and closed-end equity real estate and open-end participating mortgage accounts	Equity real estate — national; participating mortgage — all regions except mountain states	\$100,000	Equity real estate — 13.3%; participating mortgage — 23.1% (12 months ending 3/31/82)	Investment management; equity real estate — 1.0%; participating mortgage — .75%
Commercial income-producing (office, retail, industrial)	Combination of debt-equity through direct accounts or closed-end funds	National	\$5 million per year (direct account)	Not available	Portfolio management — averages .125% of net equity; transaction fees extra
Income-producing property, mortgages	Equity ownership	Sunbelt, plus Denver, Washington, DC, Chicago, New York City	\$10 million	Approx. 16%	Negotiated from 1/2 of 1%-2%, depending on program
Mortgages, income-producing property	10-70% equity participation	California — 80%; Sunbelt — 20%	Equity — \$10,000; debt — \$25,000	12-25% on gross dollars invested	4-12% plus back-end participation of 30%
100% income-producing property	Equity participation	Southwest	\$50,000	20%+	Negotiable
100% income-producing property	Limited partnership; direct investment; joint venture; commingled participation	National	\$100,000	8-14%	Negotiated
100% equity participation mortgages (first and wraparound)	Limited partnership; group trust; direct advisory services	National	Limited partnership — \$2,000; group trust — \$1 million	17-19% internal rate of return	Limited partnership — share in cash flow; group trust or direct advisory — asset management fee
Income-producing property — \$6.1 million; mortgages — \$5.4 million	Separate accounts; commingled funds	West — 66%; South — 31%; East — 3%	\$50,000	13.38% (12 months ending 3/31/82)	1 1/4% of net assets
Ownership in existing properties	Not available	National	\$5,000	Not available (account commenced 1/1/82)	Real estate account fees — 0.08% per month; additional contract expenses for assets under management
Debt instruments with equity features in income-producing property	Direct investment	National	\$5 million initially; \$10 million per year thereafter	Not available	Fee schedule available
100% income-producing property, both equity and debt	Participating and convertible mortgages; land sale, leasehold mortgage; joint ventures; 100% equity w/ or w/out debt	Continental U.S.	\$5 million	Varies	Asset management fees charged to accounts

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
CAPITAL CONSULTANTS 2300 S.W. First Portland, OR 97201	David Nelson Vice President James Crumpacker Assistant Vice President 213/932-4567	\$111	33	\$111
CITIBANK, N.A. 153 East 53rd Street New York, NY 10043	W. Herbert Crowder, III Vice President/Real Estate Investments and Management 212/559-9332	\$3,346	34	\$1,801
COLDWELL BANKER CAPITAL MANAGEMENT SERVICES 533 Fremont Avenue Los Angeles, CA 90071	Reid G. Samuelson First Vice President & Division Manager 213/613-3491	Approx. \$600	35	Approx. \$600
CONNECTICUT GENERAL LIFE INSURANCE CO., A CIGNA Corp. Company Hartford, CT 06152	Stephen Cordes Pension Investment Officer 203/726-6506	\$1,100 (4/1/82)	25 (4/1/82)	\$44 in RESA (4/1/82)
CONNECTICUT MUTUAL LIFE INSURANCE CO. 140 Garden Street Hartford, CT 06115	Norman Hausmann Director/Group Pension Sales 203/727-6637	\$500	8	\$25
CONSOLIDATED CAPITAL INSTITUTIONAL ADVISORS 1900 Powell Street Emeryville, CA 94608	Richard G. Wilback President Philip V. Mader Senior Vice President 415/852-7171	\$1,500	500	Approx. \$75
CORPORATE PROPERTY INVESTORS 250 Park Avenue New York, NY 10169	Hans C. Maulner President 212/725-2150	\$2,000	25	Approx. \$1,500
CROCKER REAL ESTATE INVESTMENT GROUP 44 Montgomery Street, Suite 2110 San Francisco, CA 94104	John H. Dracott Vice President 415/477-7162	\$145 (5/31/82)	221	\$120
DIVERSIFIED HOLDINGS CORP. 415 Park Avenue South New York, NY 10016	Peter B. Daenzer President 212/684-7979	\$700+	20	\$10
RICHARD ELLIS 200 East Randolph Drive, Suite 6145 Chicago, IL 60601	Donald H. Bidel President (312) 961-1105	\$607	3	\$559
EQUITABLE LIFE ASSURANCE SOCIETY OF THE U.S. 1285 Avenue of the Americas New York, NY 10019	Mary Ann Fullam Assistant Product Manager 212/554-8970	\$16,000 (12/31/81)	263 in Separate Account No. 8 (ISA 8) (12/31/81)	\$16,000 (12/31/81)
EQUITEC FINANCIAL GROUP 3732 Mt. Diablo Boulevard, Suite 260 Lafayette, CA 94549	Ronald E. Silva Manager, Pension Sales 415/283-8900	\$425	3	\$4.75

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Income-producing property — 29%; mortgages — 71%	Units in open-end fund (hybrid); mortgages	National with emphasis on West Coast	\$1 million	9%-10% cash-on-cash	Varies
Mortgages — \$1,009 million; income-producing property — \$191 million	Equity ownership, participating first mortgages, individually structured separate accounts	National	\$5 million	14-18%	Fee schedule available upon request
100% income-producing property	Limited partnership	South — 75%; North — 25%	\$1 million	13-27% depending on fund	Management fee based on cost, with performance incentive fee
100% income-producing commercial property (office, office-warehouse, industrial, retail)	Units in open-end pooled account (RESA); single-customer and limited customer closed-end accounts	National in smaller cities and outlying metro areas	\$100,000 for initial and ongoing RESA deposits	10.74% annualized (6 mos. ending 3/31/82)	RESA — 1.0% annual management fee on net assets of RESA; contract expense charge based on total pension assets under CG management
100% income-producing property (office buildings, industrial, shopping centers)	Units in open-end commingled fund	Midwest, Southwest, West, Northwest	\$100,000	15.7%	1% per year on net asset value of fund
Mortgages — 50%; income-producing property — 50%	Units in commingled funds; participating mortgage	Sunbelt	\$5,000	Not available	Incentive fee — 25% of appreciation; acquisition fee — 6%
100% income-producing property	Shares in Corporate Property Investors while firm is seeking additional funds	National	\$5 million	Not available	None
100% income-producing property	Units in open and closed-end funds; separate accounts	National with emphasis on West and Southwest	No minimum in open-end fund	Equity fund — 11.89% annualized; equity real estate — 20.33% annualized; development — 34.06% annualized (all as of 12/31/81)	Open and closed-end funds — 1.2%; separate account fee based on acquisition, disposition and ongoing management
Income-producing commercial property	Mortgage debt, equity	National	\$100,000	Currently 20%+	Negotiated
Income-producing property — \$464 million; forward commitment to acquire property under construction — \$95 million	Direct, closed-end commingled fund	National	\$10 million for closed-end fund	Not available	1% of fair market value of real estate investments
SA 8 — partial and full equity in real estate property, mortgages, construction loans	Units of participation in SA 8	South — 31%; Central — 21%; West — 18%; Mid-Atlantic — 10%; Northeast — 20%	No minimum for SA 8	SA 8 — 16.3% annualized (12/31/81)	SA 8: first \$2 million — 1.10%; next \$8 million — 1.05%; next \$10 million — 1.01%; next \$25 million — 71%; next \$50 million — 41%
Income-producing commercial property (office, industrial, business park)	Commingled limited partnerships	National with emphasis on Sunbelt	\$150,000	20% internal rate of return	Acquisition — 5% of purchase price; asset management — 1.5% per year on real estate assets; incentive fee

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
EQUITY CORP. 25th Floor, First American Center Nashville, TN 37238	Linda Gene Chesnut Vice President/Portfolio Management 615/242-4417	\$100	14	\$50
EQUITY PROGRAMS INVESTMENT CORP. 5201 Leesburg Avenue Falls Church, VA 22041	Joel H. Bernstein Vice President 703/931-7600	\$300	10	\$20
FIRST ASSET REALTY ADVISORS First Bank Place Minneapolis, MN 55480	Allen J. Anderson President 612/370-4173	\$27	5	\$17
FIRST FEDERAL SAVINGS 3003 North Central, Room 406 Phoenix, AZ 85012	Rick McGill Vice President 602/248-4580	\$2,305	12	\$150
FIRST NATIONAL BANK OF ATLANTA P.O. Box 4148 Atlanta, GA 30302	David S. Graham Vice President 404/588-5104	\$58	19	\$28
THE FIRST NATIONAL BANK OF BOSTON Box 1882 Boston, MA 02105	Peter F. Tague, III First Vice President 617/434-4560	\$182 in pooled real estate funds	Approx. 300	\$182
THE FIRST NATIONAL BANK OF CHICAGO Three First National Plaza, Suite 0106 Chicago, IL 60670	Larry G. Ginnegaw Vice President 312/732-4151	\$718	101	\$30* (5/31/82)
THE FIRST NATIONAL BANK OF FORT WORTH P.O. Box 2260 Fort Worth, TX 76113	Gerald Hartman, Jr. Vice President & Trust Officer 817/390-6996	\$200	45	\$50
FIRST WISCONSIN TRUST CO. 777 East Wisconsin Avenue Box 2154 Milwaukee, WI 53201	Earl D. Lillydahl Vice President 414/765-4844	\$25	1	\$1 ²
GAVEY & CO. 80 Park Avenue New York, NY 10016	James E. Gavey President 212/867-0130	\$44	3	\$1.5
GREAT-WEST LIFE ASSURANCE CO. 60 Osborne Street North Winnipeg, Manitoba R3C 3A5	Gary N. Coopland Director/Pension Investments 204/946-9342	\$1,800	106	\$178.5
GROUP ONE INVESTMENTS 77 West Washington Street, Suite 1005 Chicago, IL 60602	Robert H. Weitzman Finance Partner 312/644-2444	\$100+	50	\$20+
GRUBB & ELLIS CO. 1333 Broadway #900 Oakland, CA 94612	Terry P. Noyer Senior Vice President 415/839-9600	\$103	3	\$45

*Additional commitment of \$1.2 million not yet invested in property.

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fees)	Fee
Income-producing property — 90% undeveloped land — 10%	Unrestricted	Southeast	\$1 million	8-10%	Acquisition plus management fee, varies
100% income-producing property (builders model homes)	Limited partnerships	Primarily Sunbelt	\$1 million	Past average 17% per annum	Acquisition fee at time of purchase, separate fees for property and portfolio management
100% income-producing property	Units in open- and closed-end funds	National	\$1 million	13.2%	1.25% of net asset value
Not available	Generally, 90% interest in mortgage loan pools of residential or commercial loans	Arizona and California	\$1 million	Market rate — usually 50 basis points over GNMA yields in cash market	Negotiated servicing fee
Timberland	Equity	Southeast (Virginia through East Texas)	\$250,000	Inflation +	1.2% of value of timberland; 25% on cash equivalent portion
Income-producing property	Unit ownership in open-end pooled equity real estate fund	National	No minimum	15% (12 months ending 12/31/81)	1% per annum based on participating trust's share of market value of fund at period-end, \$500 minimum annual charge
Fund F — income-producing property, pre-developed land mortgages	Units of participation in Fund F, units in The First Apartment Fund	Metropolitan areas: Midwest — 29.2%, West — 35.7%, South — 26.7%, East — 8.4%	\$1 million for The First Apartment Fund	15.9% (12 months ending 5/31/82)	Basic account charge of \$1,500 plus 1.2% annual fee
Income-producing property — 70% undeveloped land — 5% mortgages — 25%	Individual ownership, pooled funds, joint ventures	National with emphasis on Texas	Varies by participation	Varies by manner of investment	Varies by participation, fee schedule available
100% fee and clear nonresidential income-producing property	Units in commingled fund	Currently Wisconsin, Eastern Minnesota, Northern Illinois	\$100,000	Approx. 14%	1 1/2% on real estate assets, 1/4% on liquid assets
100% income-producing residential multi-family apartments	Limited partnership interest	National	\$25,000-\$100,000	30% average (1981)	5-15% of cash distribution, including profits
Warehouse — 18.8% office/warehouse — 16.6% retail — 16.7% office — 28.9%	Units in pooled fund	B.C. — 7.9%, Manitoba — 12.3%, Saskatchewan — 1.7%, Maritimes — 26.5%, Ontario — 19%, Alberta — 30.3%, Quebec — 2.3%	No minimum	14.03%	First \$1.5 million — 54%, next \$3.5 million — 36%, next \$15.0 million — 24%, over \$20 million — 18%
Income-producing property — 65% ground leases — 5% mortgages — 10%	Varies according to investor's need	National	\$50,000	8-10%	Negotiated according to transaction structure
Equity ownership of commercial income-producing property — 33% participating mortgage loans — 67%	Equity ownership	West, Southwest	\$1 million	18%	Asset management — 1/12 of 1% per month based on book value; acquisition fee — 1%

Name and address	Person to contact phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
JOHN HANCOCK MUTUAL LIFE INSURANCE CO. P.O. Box 111 Boston, MA 02122	Michael B. O'Toole Vice President 617 421-6168	\$5,000	75	\$642
INTEGRATED RESOURCES 666 Third Avenue New York, NY 10017	Joel M. Pastorek Executive Vice President 212 878-9200	\$3,000+	Approx. 100	\$30+
INTERFIRST BANK DALLAS, N.A. P.O. Box 83794 Dallas, TX 75283	Nathan O. Finke Vice President 214 744-8323 Ronald W. Landen Vice President 214 744-8567	\$250	60	\$250
THE INVESTMENT COUNSEL CO. 56 East Pine Street #200 Orlando, FL 32801	Byron W. Gitz Vice President/Real Estate 305 841-8241	\$50	10	\$50
JMB INSTITUTIONAL REALTY 875 North Michigan Avenue, Suite 2900 Chicago, IL 60611	John S. Lillard President 312 440-5042	\$180+	27	\$180+
JONES LANG WOOTTON REALTY ADVISORS 449 Park Avenue New York, NY 10022	John A. Wynn President 212 688-8181	\$400	6	\$400
THOMAS L. KARSTEN ASSOCIATES (Subsidiary of First Interstate Bancorp) 12901 Wilshire Boulevard Los Angeles, CA 90024	A. Raymond Chinn, Jr. Executive Vice President John M. Lancaster Senior Vice President 213 473-1128	Direct - \$110*	Direct - 2*	Direct - \$110
THE KOLL CO. 4490 Van Ness Avenue Newport Beach, CA 92660	David P. McPherson Executive Vice President 714 833-3030	\$600	1	\$60
LANDSING 800 El Camino Real Menlo Park, CA 94025	Ronald D. Roberts Vice President 415 321-7100 800 227-7374	\$275+	Approx. 5,000	\$125
LASALLE PARTNERS 11 South LaSalle Street Chicago, IL 60603	Kenneth M. Campa President Stanislaw Maliszewski Vice President 312 782-5800	\$1,200	Approx. 20	\$350
LANDAUER ADVISORS 230 Park Avenue, Suite 3710 New York, NY 10166	Patrick J. Callan President 212 687-2323	Approx. \$500	4	Approx. \$500

*Pooled fund offered 7-82 by Karsten Institutional Realty Advisors.

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Equity Real Estate Account (ERA) — income-producing property	Units in open-end commingled fund	East — 22% South — 30% Midwest — 24% West — 24%	\$250,000	13.3% net	1% per year charged quarterly on net assets of previous quarter-end
Currently: mortgages — \$17 million; short-term money instruments — \$13 million	Common stock in Resources Pension Shares, Inc. (REIT), with dividend reinvestment plan	National	\$1,000 in most states	Estimated 15.3% internal rate of return without dividend reinvestment	Offering, acquisition, operation, and liquidation fees; fee schedule available
Office buildings — 65% warehouse — 12% retail — 10% ground leases — 3% undeveloped land — 3% mortgages — 7%	Units in open- and closed-end fund; separate accounts	Southwest	\$25,000	13.82% for pooled fund (12 months ending 12/31/81)	1% of market value per annum
100% mortgages	Negotiable	Florida	\$500,000	Negotiable	Negotiable
Income-producing property (neighborhood shopping centers, office buildings)	Equity participation	Florida, New York City, Tulsa, Sacramento	\$150,000	Group Trust I — 17.3% annualized (8/80-12/81)	Property acquisition; asset management; sale; other services at 1% annually on all real estate assets at market value; property management; maximum 5% of rents
100% mortgage property and equity	Direct purchase; separate accounts	National	\$50 million	Varies	Varies according to services provided
Income-producing property (mortgages)	Direct investment	National with emphasis on West	\$1.5 million	Varies	Direct investment — negotiable
Income-producing office and industrial property	Joint venture	California, Arizona, Washington, Oregon	\$5 million	20%+	50% participation in profits with guaranteed return to pension fund or incentive fee to Kull Co. with all return to pension fund
Income-producing property (apartment, shopping centers, office, industrial)	Units in closed-end equity trust; participating debt; fee ownership	West, Southwest	\$5,000	15.20	Negotiable
Income-producing property	Units in commingled fund	Major metro areas throughout U.S.	\$5 million	Not available	11% of net real estate assets
Income-producing property (office buildings, shopping centers, industrial)	Equity ownership through direct investment or participation in closed-end group trust	National with emphasis on major metro areas	\$5 million for closed-end group trust	Varies	Closed-end group trust — 1.25% annually of contributions during years 1-5; 1.0% annually of appraised net asset value years 6-10; direct — negotiated

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Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
LEHNDORFF U.S. EQUITIES 2501 Cedar Springs, Suite 340 Dallas, TX 75201	John D. Gourley President 214/658-0800	\$1,500 (100%)	6	\$200
LIEBERMAN COS. 554 Middle Neck Road Great Neck, NY 11023	Bruce R. Lieberman President 516/466-6565	\$30	2	\$2
LOEB PARTNERS REALTY 521 Fifth Avenue New York, NY 10175	Gary L. Naughton Vice President 212/883-0371	\$500	4	\$150
MARCIL TRUST CO. 55 Avenue Road, Suite 2900 Toronto, Ontario M5R 3L2	John Donald President 416/922-1831	\$1,100	16	\$415
MASSACHUSETTS MUTUAL LIFE INSURANCE CO. 1295 State Street Springfield, MA 01111	Peter J. Vignia Vice President 413/788-8411	\$3,243	35	\$26
JOHN McMAHAN ASSOCIATES 201 California Street San Francisco, CA 94111	John McMahon President 415/433-7770	\$90+	3	\$34
MERCANTILE TRUST CO. P.O. Box 287 St. Louis, MO 63166	Arthur C. Jones Vice President 314/425-2735	\$31,000	3	\$31.2
MERRILL LYNCH HUBBARD 740 Broadway New York, NY 10004	James T. Foran Vice President 212/908-8440	\$650	10	\$550
METROPOLITAN LIFE INSURANCE CO. One Madison Avenue New York, NY 10010	Peter Braun Vice President (Group Pension Marketing and Sales) 212/578-2937	\$179.9 (3/31/82)	23	\$179.9 (3/31/82)
MORGAN GUARANTY TRUST CO. OF NEW YORK Nine West 57th Street New York, NY 10019	Rohit M. Desai Senior Vice President Marian U. Pardo Vice President 212/826-7302	\$1,100	250	\$500
MUTUAL OF NEW YORK 1740 Broadway (14th) New York, NY 10019	Phil Maisano Divisional Vice President Pension Investment Marketing 212/708-2600	\$2,800	20	\$13
NEW YORK LIFE INSURANCE CO. 51 Madison Avenue New York, NY 10010	William D. Calligan Vice President 212/576-5743	\$250	3	\$26

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Income-producing property	Units in pooled funds; direct investment	Sunbelt, West, Northeast	\$1 million	20% total	1.25% of value of portfolio annually
Income-producing property, mortgages	Varies according to investor's needs	Southeast, Southwest	\$500,000	Varies	Negotiable
Income-producing property — 90%, land — 10%	Direct investment	National	\$1 million	Varies	Varies
Income-producing property — 54%, mortgages — 46%	Direct investment by single fund or in conjunction with other funds	Canada, Chicago	\$5 million	20% + internal rate of return	Negotiable
Income-producing property	Units in open-end commingled fund	Northeast — 22%, Midwest — 13%, Southwest — 22%, Rocky Mountain — 16%, Southeast — 27%	\$250,000	10.06% (6 months ending 3/31/82)	1% of market value on an annual basis
Income-producing commercial property	Units in pooled account, separate accounts, fee ownership, participating mortgage, convertible mortgage, joint ventures	National with emphasis on West and Southwest	Pooled account — \$2 million; Separate account — \$10 million	16% internal rate of return (investment target)	Pooled account: annual fee of 1.2% of assets managed; separate account: acquisition — 2-3% of purchase price; portfolio management — 5% of assets
Income-producing property — 56%, convertible mortgages — 42%	Units of participation	Texas — 72%, Florida — 10%, California — 8%, Missouri — 10%	\$25,000	12.7% (12 months ending 3/1/82)	1% on net real estate assets plus .25% on short-term investments
Income-producing property — 50%, mortgages — 50%	Direct investment	Northeast — 16%, Southeast — 12%, Midwest — 23%, Northwest — 7%, Southwest — 16%, West Coast — 25%, Canada — 1%	Debt — \$5 million; equity — \$10 million	Varies	Varies
Income-producing property (office buildings, industrial, retail, hotel/motel, land)	Units in open-end commingled and diversified funds and in closed-end separate account	National	Open-end funds — \$100,000; closed-end fund — \$2 million	Separate Account RE — 16.9% (1981); Tower Fund — 8.55% (unannualized for 11 months beginning at inception on 1/30/81)	Open-end funds: investment management fee — 1% per year of net asset value; closed-end fund: 1.25% annual fee
Income-producing property	Units in open-end fund; separate accounts	National	\$1 million initially for open-end fund	10.2% (time-weighted annual return for 12 months ending 3/31/82)	First \$75 million — 1%, \$75-\$150 million — .8%, \$151-\$250 million — .6%; over \$250 million — .4%
100% income-producing property (office buildings, shopping centers, warehouses)	Units in open-end commingled equity separate account	Sunbelt — 33%, Northeast — 25%, West — 20%, Midwest — 22%	\$100,000	25.9% (since account inception on 5/14/81)	1% asset management fee plus up to .4% contract charge annually
100% income-producing property	Unit value in real estate separate account	Continental U.S.	\$250,000	Not available	1% asset management fee

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
NORTH AMERICAN LIFE ASSURANCE CO. 105 Adelaide Street West Toronto, Ontario M5H 1R1	Andrew Griffith Pension Executive 416/362-6011	\$300	40	\$35
NORTH CAROLINA NATIONAL BANK One NCNB Plaza Charlotte, NC 28255	Robert L. Reynolds Vice President 704/374-8379	\$210	325	\$210
PAINE WEBBER PROPERTIES 100 Federal Street Boston, MA 02101	George H. Bigelow Senior Vice President 617/423-8150	\$100+	4,046	\$70
PARAGON GROUP 7557 Rambler Road, Suite 1200 Dallas, TX 75231	Seabie W. Hickson, III Vice President 214/696-8000	\$500+	1	\$8
THE PECKHAM BOSTON CO. Four Longfellow Place, Suite 3305 Boston, MA 02114	John M. Peckham, III President 617/523-4440	\$20+	4	\$20+
PHOENIX MUTUAL LIFE INSURANCE CO. One American Row Hartford, CT 06115	Joel C. Cohan Vice President 203/278-1212	\$1,058	6	\$28
PROPERTY CAPITAL ADVISORS 200 Clarendon Street Boston, MA 02116	John A. Cervieri, Jr. President 617/536-8600	\$400+	25+	\$200+
THE PRUDENTIAL INSURANCE CO. OF AMERICA Prudential Plaza Newark, NJ 07107	Robert H. Murphy Vice President 201/877-7884	\$23,537 (3/31/82)	405 (3/31/82)	\$4,932 (3/31/82)
PRUDENTIAL MORTGAGE BANKERS & INVESTMENT CORP. 2067 Mount Diablo Boulevard Walnut Creek, CA 94596	William Kleisath President 415/933-8846	\$29	39	\$25
REPUBLICBANK DALLAS P.O. Box 241 Dallas, TX 75221	David J. Pittman Vice President & Trust Officer 214/653-6506	\$269	21	\$51
ROSEN ASSOCIATES 333 Jericho Turnpike Jericho, NY 11432	Robert A. Rosen President 516/822-5350	\$200+	7	\$100
THE RREEF CORP. 650 California Street, Suite 1800 San Francisco, CA 94108	Paul Sack Principal 415/781-3300	\$1,400	44	\$1,400
SAVAGE/FOGARTY COS. 699 Prince Street Alexandria, VA 22314	Jeffrey H. Riddel Vice President 703/549-1160	Approx. \$150	6	Approx. \$75

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
100% income-producing property	Units in pooled fund	North America	\$50,000	13.6% (1981)	78% annually as a surcharge
Income-producing property, undeveloped land	Units in NCNB real estate fund, individually structured accounts	Sunbelt with emphasis in Southeast	\$100,000 for fund	16.5% (1981)	1.2% annually of market value
Income-producing property (shopping centers, apartments, industrial, hotel, office buildings)	Units in limited partnerships	National	\$3 million-\$9 million	15%+	10% of cash flow plus 15% of profits after investors receive 15% annual return
Office building	Limited partnership interest	Sunbelt	Varies according to project	Competitive market rate	Varies according to project, status of partner, type of real estate
100% income-producing property	Direct ownership	Continental U.S.	\$1 million	Varies according to risk	Negotiable
Income-producing property	Units in commingled separate account (RESA)	National	\$50,000	RESA — 14.90% (annualized time-weighted rate of return since inception on 6/30/81)	RESA: annual fee on net asset value of fund — 1.00% on first \$1 million; .9% on next \$1 million; .8% thereafter
100% income-producing property	Varies according to property	Continental U.S.	\$2 million	11%-12% minimum	Based upon net cash flow of the investment
PRISA & PRISA II — income-producing property, mortgages; PRIMOR & MORISA — mortgages	Contributions to PRISA, PRISA II, PRIMOR, MORISA	All 48 states (domestic) nationally	PRISA — \$150,000 per year; PRISA II — \$1 million	PRISA — 14.1% (12 months ending 3/31/82); PRISA II — 13.3% (12 months ending 3/31/82); PRIMOR — 4.2% (12/31/81-3/31/82); MORISA — 4.2% (12/31/81-3/31/82)	PRISA & PRISA II — 1.00% of first \$100 million; .75% of next \$50 million; .50% of the excess; PRIMOR & MORISA — .75% of mortgage and construction loans; short-term investment charges extra
1st and 2nd deeds of trust	Full ownership	Northern California	\$100,000	18%	None
Income-producing property	Units in open-end commingled fund	Southwest, Southeast	Must have capacity to grow to \$1 million in 3 year period	Varies with specific investment mode and method of calculation, available upon request	Maximum of 1.2% of market value of fund
100% income-producing property	Equity ownership	National	\$100,000	Varies	Varies depending on services
100% income-producing property	Units in closed-end commingled real estate equity funds	Metro areas with populations in excess of 1 million	USA series — \$15 million; West & Mid-America series — \$1 million	Not available	% of assets under management
100% income-producing property	Full or substantial ownership	Emphasis on greater Washington, DC, metro area	Generally \$5 million	Varies	Varies

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
SCUDDER REALTY ADVISORS 333 South Hope Street Los Angeles, CA 90071	Christopher B. Davis Vice President 213/628-1144	\$500+	8	\$500+
SMITH BARNEY REAL ESTATE CORP. 1345 Avenue of the Americas New York, NY 10105	Lewis W. Kresch First Vice President 212/399-6505	\$300	60	\$100
STATE STREET BANK & TRUST CO. Asset Management Division 225 Franklin Street Boston, MA 02110	Harry Sterling, Jr. Vice President Robert E. Kilroy Assistant Vice President 617/786-3236	\$5 (7/23/82)*	1	\$5 (7/23/82)*
SUHRCO REAL ESTATE ADVISORS 1818 Westlake Avenue North #408 Seattle, WA 98109	Edwin C. Suhrbier President 206/284-8907	\$22	1	\$14.5
SUN BANK, N.A. P.O. Box 3631 Orlando, FL 32802	Julian Rogers Vice President 305/237-5064	\$35	65	\$4.5
RALPH C. SUTRO CO. 4900 Wilshire Boulevard Los Angeles, CA 90010	S.Q. DellaGrotta Vice President 213/937-4000	\$8,500	36	\$342
THIRD NATIONAL BANK 201 Fourth Avenue North Nashville, TN 37244	Campbell Brown Vice President 615/748-4610	\$70	77	\$13.5
TRANSWORLD RESOURCES 1517 Second Avenue Walnut Creek, CA 94596	W. John Miller President 415/944-0963	\$500	3	\$200
THE TRAVELERS INSURANCE CO. One Tower Square Hartford, CT 06115	Thomas E. Keating Vice President 203/277-7777	\$8,000+	\$6,000+	Approx. \$4,000
WACHOVIA BANK & TRUST CO., N.A. P.O. Box 3099 Winston-Salem, NC 27102	Nicholas L. Verano, III Vice President 919/748-5906	\$337	287	\$309
WELLS FARGO REALTY ADVISORS P.O. Box 30015 Terminal Annex Los Angeles, CA 90291	Peter Hitch Vice President 213/822-2032	\$408	140	\$147
YORK ASSOCIATES 4801 Massachusetts Avenue, Suite 300 Washington, DC 20016-2090	John C. York, Jr. President 202/362-1400	\$65	6	\$40

*Closed-end fund in conjunction with Aldrich, Eastman & Wallich expected to have closed by September 1 with approximately \$100 million.

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Debt instruments with equity attributes in form of participation in increasing gross income and property appreciation	Varies	Sunbelt with emphasis on southern California	\$2 million	17-19%	2% of investment at time of application
100% income-producing property	Units of participation in commingled fund	National	\$250,000	20-25% per year	Asset management fee — 2% of first \$25 million; 1.5% of next \$35 million; 1% thereafter, plus performance fee
Primarily commercial income-producing property (office, retail, industrial)	Units in open-end commingled fund	National	\$10 million in same combination with initial commitment in 3 equal installments	Not available (fund closed 9/82)	Management fee — 75% of net assets of fund per year
Income-producing property (shopping center, multi-family)	Direct investment	Northwest	\$100,000	Varies	4-14% depending on size
Convertible mortgage — 44% shopping center — 22% reserve — 34%	Units in open-end fund	Florida & Southeast	1 unit approx. \$1,000	13-25%	75% of net asset value of contribution
Income-producing property — \$127 million mortgages — \$215 million	Equity and debt	National	\$500,000	14-16%	Negotiated
Income-producing property — 97% mortgages — 3%	Direct ownership; commingled real estate fund	National with emphasis on Sunbelt	\$1,000	11.4% (12 months ending 6/30/82)	1% of unit value of commingled fund
100% income-producing property	Syndications with equity participation	National	\$10 million	10% minimum (goal)	Acquisition and disposition fee — 2% negotiated management fee
Separate Account R (S.A.R.) — income-producing property (office, industrial, shopping centers, apartments), agricultural	S.A.R. — equity, debt and balanced participation; Separate Account T (S.A.T.) and ASA (S.A. ASA) — equity ownership	S.A.R. — diversified nationally; S.A. ASA — diversified in all regions except East	S.A.R. — \$100,000; S.A.T. and S.A. ASA — \$1 million	S.A.R. equity — 19.67%, mortgages — 10.83%, balanced — 16.55% (all figures 12 months ending 12/31/81); S.A. ASA 5.79% (12 months ending 3/31/82); S.A.T. established 3/31/82	S.A.R. — 1% annual investment management fee based on net assets; S.A.T. — 1.25% annual investment management fee; S.A. ASA — 1.25% annual investment management fee
Income-producing property — 87.9% mortgages — 1.0% cash temporary investments — 9.2% real estate securities — 1.9%	Units in open-end commingled fund; individual accounts available	National with emphasis on major metro areas	\$100,000	25.2% (3/31/82)	1.125% of total market value of investment in real estate; .25% annually of investment in mortgages, sale/leasebacks, cash
Income-producing property	Units in commingled fund; separate accounts	West, Sunbelt	\$500,000	15.5% (1981)	1.25% of net real estate assets; 0.5% of short-term securities
100% income-producing property	Equity ownership	National	\$5 million	16% internal rate of return	Incentive fee

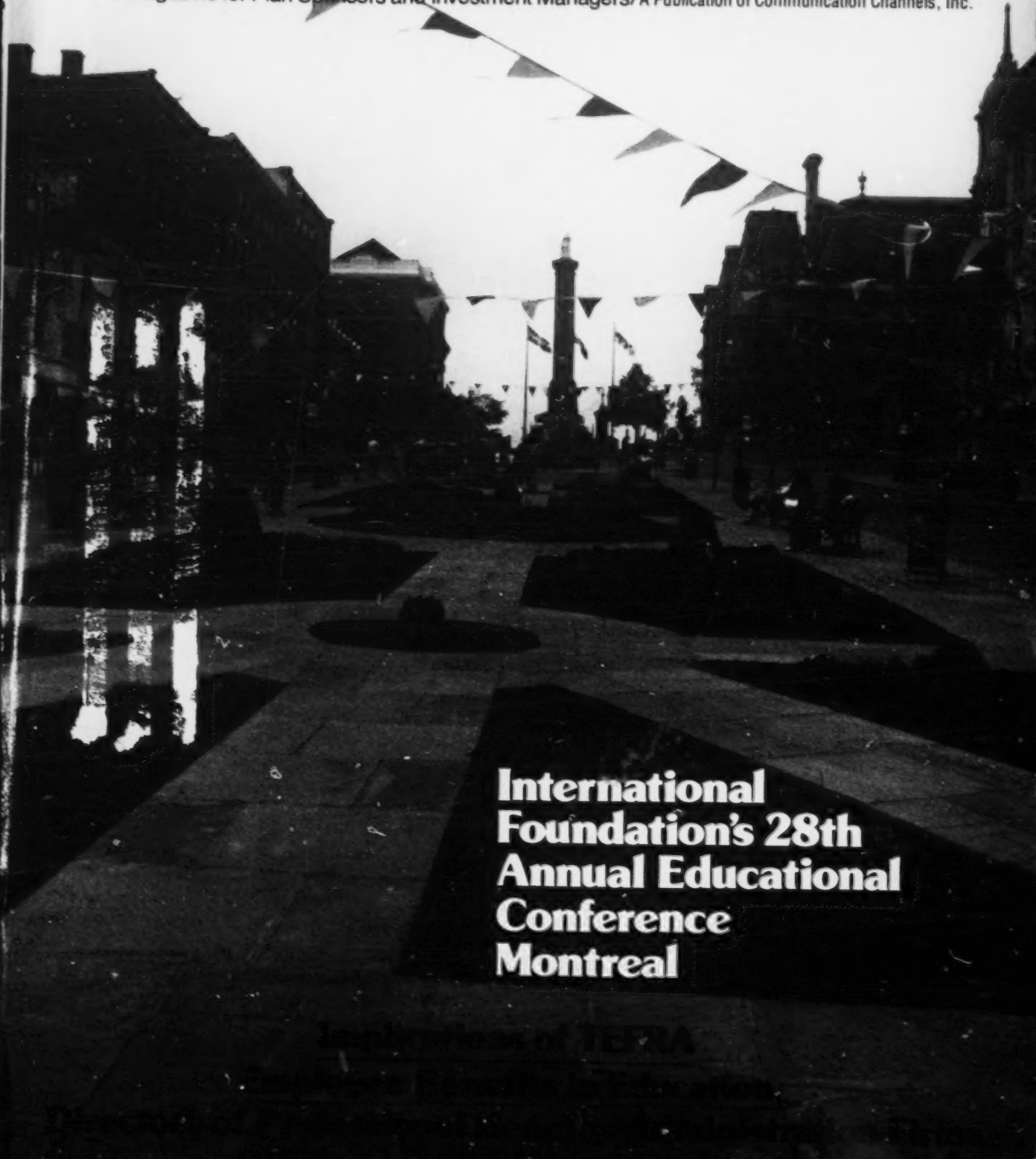
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**International
Foundation's 28th
Annual Educational
Conference
Montreal**

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October 1982
Volume 18 Number 10

Features

- International Foundation of Employee Benefit Plans: Staying in the mainstream of employee benefits** 15
by Wesley G. Jeltema
President Jeltema talks about how the Brookfield, Wisc.-based association has constantly striven to expand and improve education in employee benefits during the past three decades of rapid growth in the field.
- Public Employee Plans: Employee benefits in education** 21
Pension World studies the state of benefits in public education, examining data from the latest Teacher Retirement Provision Survey compiled by the National Education Association.
- Tax Equity and Fiscal Responsibility Act: New tax law mandates pension plan changes** by Richard C. Murphy and Henry von Wodtke 27
Every employer must now re-examine existing defined benefit and defined contribution plans to ensure that they meet the requirements of TEFRA and still achieve company goals. Here, the authors analyze the changes wrought by the new law.
- Benefits Communication: The legal framework of benefits communication** by Robert A. Bohrer 35
ERISA disclosure requirements are among the most basic responsibilities imposed on fiduciaries of employee benefit plans. This attorney summarizes ERISA disclosure requirements and the manner in which some of them have been interpreted by the courts.
- An Actuary's View: Multiemployer plan withdrawal liability** by Lawrence T. Brennan 41
With more than 100 lawsuits contesting the constitutionality of the Multiemployer Pension Plan Amendments Act of 1980, a financial time bomb has been placed in the hands of actuaries. A partner at Kwasha Lipton takes a look at some of the implications.
- Investment: A new look at investment decision-making models** by Charles H. Dym 47
Investment decision-making models provide conceptual frameworks for organizing, structuring, and interpreting data but cannot take into account many of the intangible factors that the human mind can. However, does the manager using a model have an edge?
- Pension World Basics: Anatomy of a deep discount bond** by Kevin W. Harper 61
Original issue deep discount bonds have experienced a surge in popularity of late. This certified public accountant discusses the advantages and disadvantages — both to the issuer and the investor — of DDB's.
- Directory of Professional Benefit Administration Firms** 65
Pension World presents an exclusive listing, compiled by the Society of Professional Benefit Administrators (SPBA), of more than 150 firms that provide third-party administration to employee benefit plans, plus an introduction by SPBA Executive Director Frederick D. Hunt, Jr.

Departments

Editorial	4	Pension News	53	Meetings & Conventions	58
International Pension World	6	Pension People	56	Arbitration Awards	92
Washington Newsletter	10				



Cover: The accomplishments of the International Foundation of Employee Benefit Plans are as striking as the flora in Montreal, Canada, site of the 28th Annual Conference. President Jeltema's observations begin on page 15.

Cover photo by Bill Coker.

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Employee benefits in education

Workers in various professions view their pension plans with differing levels of emphasis. To some, a pension is a fringe benefit; to others, it is an integral part of the total compensation package. According to the National Education Association (NEA), a Washington, D.C.-based organization representing over 1.7

million members who work in public education, "in the eyes of teachers, a retirement plan is deferred payment for services rendered—a condition of employment—no more, no less."

A number of legislative changes have occurred in the past few years in employee benefits in education, though many educators would

probably agree that there is still a long way to go. According to a statement by NEA during Senate subcommittee hearings on S. 2105 and S. 2106, almost one-fifth of U.S. teachers have lost retirement credits at some point during their careers. In addition, a lack of standardization of pension terminology and lack of minimum disclosure

Table I Legislative Changes

System	Benefit Formula	No-Member Contribution	Soc. Sec. Integration	Survivor Benefit	Death Benefit	Disability Benefit	Ad Hoc C.O.L.A.	Board Make-up
Alabama							X	
Alaska							X	
Arizona	X						X	
Arkansas	X						X	X
Calif.							X	
Colorado				X		X	X	
Conn.				X	X	X	X	X
Delaware							X	
D.C.				X		X		
Florida	X	X		X		X		
Georgia	X							
Hawaii							X	
Idaho						X	X	
Illinois							X	
Indiana							X	
Iowa	X						X	
Kansas	X				X	X	X	
Kentucky				X	X	X	X	
Louisiana				X	X	X	X	
Maine		X		X			X	
Maryland								
Mass.								
Michigan				X	X	X	X	
Minnesota							X	X
Miss.	X			X		X	X	
Missouri	X							
Montana							X	X
Nebraska	X							
Nevada	X			X	X		X	
New Hamp.	X			X			X	X
New Jrsy.							X	
New Mex.							X	
New York							X	
N. Carolina	X			X	X		X	
N. Dakota				X				
Ohio							X	
Oklahoma	X			X	X		X	
Oregon	X						X	
Penn.							X	
Rh. Island								
S. Carolina				X		X	X	
S. Dakota	X					X		X
Tenn.		X			X		X	
Texas	X			X	X		X	
Utah			X				X	
Vermont								
Virginia								
Wash.							X	
W. Virginia				X			X	X
Wisc.								
Wyoming		X					X	

Source: 1981 NEA Teacher Retirement Provision Survey

Table II Normal Retirement Requirements and Benefit Formula

System	Age — Service Combinations				Age	Service	Normal Formula	Limit %FAS	Special Provisions
	Age	Service	Age	Service					
Alabama	60	10	99	30			X	2.01	
Alaska	55	8					X	2.00	
Arizona	65	5	60	25	62	10	X	2.00	Prior service benefits for service before employer covered.
Arkansas	60	10	55	35			X	1.40	\$6600 + 1.8 x yrs. bef. 69 + 1.8 x yrs. 69-77 + 1.59 x yr.
Calif.	60	5					X	2.00	
Colorado	55	30	60	20	65	5			FAS x yrs. of ser. x 2.5% 1-20; yrs. x 1.0% yrs. 21-40.
Conn.	60	20		35			X	2.00	To early vested proratable disability retirements.
Delaware	99	30	60	15	62	10	X	1.60	
D.C.	55	30	60	20	62	5	X	1.50	1.5 — 1st 5 yrs.; 1.75 — 2nd 5 yrs.; 2.0% all service over 10 yrs.
Florida	62	10	99	30			X	1.60	Prev. state credit earned RCD.
Georgia	99	30	62	10			X	1.92	Min. yrs. serv. x \$12; Max 40 Yrs. srv.
Hawaii	55	5	99	25	70	5	X	2.00	
Idaho	65	5					X	1.67	
Illinois	60	10	62	5			X	1.67	1.67 10 yrs. 1.9 10 yrs. 2.1 for 10 yrs. 2.3 over 30.
Indiana	65	10	50	15			X	1.10	Early retirement & option factors applied if applicable.
Iowa	65	1						0.46	50% FAS based on 3 yrs. serv., \$20,000 max.
Kansas	65	1					X	1.25	FAS x .01 x Yrs. Prior service (.0075 some case).
Kentucky	60	5					X	2.00	Basic formula: Yrs. after 1941 only; before 1941 \$88/year.
Louisiana		20	55	25	99	30	X	2.50	FAS x yrs. serv. x 2.00% for yrs. prior 1900.
Maine	60	99					X	2.00	
Maryland	60	1	99	30			X	1.81	
Mass.	55	99	99	20			X	2.50	Varies — 1.5% at age 55 to max of 2.5% at age 65 and over.
Michigan	60	10	55	30			X	1.50	
Minnesota	65	10	62	30					1% for 1st 10 Yrs.; 1.5% subseqt. yrs.
Miss.	99	30	60	10	65	10	X	1.63	X
Missouri	99	25	99	30	60	5	X	2.00	If 60 in 1975 1.5% + .60 x yrs. serv. + 34% ea. mo. 60 to age 65.
Montana	60	5	99	30			X	1.67	
Nebraska	65	5					X	1.25	Years of service are after 1968.
Nevada	60	10	55	30			X	2.50	
New Hamp.	60	99					X	1.68	
New Jrsy.	60	1					X	1.67	Years of service over 60 x FAS.
New Mex.	65	5	60	15	99	35	X	2.00	FAS x yrs. serv. x 1.50% for yrs. prior 1957.
New York ¹	55	20	55	2					
N. Carolina	65		99	30			X	1.57	
N. Dakota	65	10	60	35			X	1.00	
Ohio	65	5	99	30			X	2.00	Money purchase.
Oklahoma	60	10	55	30			X	2.00	
Oregon	60	99	58	99			X	1.00	Variable annuity.
Penn.	62	1	60	30	99	35	X	2.00	
Rh. Isind.	60	10	55	30	99	35	X	1.70	1.7% 1st 10 Yrs.; 1.9% 2nd 10 yrs.; 2.4% remainder.
S. Carolina	99	30	65	99					1st 4800 AFC x 1.25% x yrs. serv. + AFC > 4800 x 1.65% x yrs. serv.
S. Dakota	65	5					X	1.00	
Tenn.	60	30	99	30					1.5% 1st 10,800 + 1.75% bal. FAS x srvc.
Texas	65	10	60	20			X	2.00	Full ben. avail. if age + service = 95.
Utah	60	20	62	10	65	4	X	2.00	Before 7/67 1.10%; 7/67-6/75 1.25%; After 7/75 2.00%.
Vermont	60	99		30			X	1.67	
Virginia	65	99					X	1.50	Alternate formula: FAS-\$1200 x yrs. serv. x 1.65%.
Wash.	60	5	55	25	99	30	X	2.00	Maximum of 30 years credit.
W. Virginia	99	35	55	30	60	5	X	2.00	
Wisc.	65	99					X	1.30	Money purchase if more than formula.
Wyoming	50	4	99	25			X	2.00	2% is after 7/1/75; money purchase before 7/1/75.

¹Not included in data

Source: 1981 NEA Teacher Retirement Provision Survey

standards of public pension provisions have made the establishment of equivalency between teacher retirement systems difficult.

Access to funds contributed to their accounts continues to be a priority for many teachers. Benefits in 24 states are guaranteed by state statutes, and only eight states have a constitutional guarantee of benefits (Alaska, Hawaii, Illinois, Maryland, Michigan, New York, North Carolina, and Washington).

Despite these industry problems, how do educators fare in their specific employee benefits programs? In 1979 and again in 1981, NEA conducted a comprehensive

Teacher Retirement Provision Survey to obtain uniform data on employee benefits in education across the U.S. The following information is extracted from the 1981 survey results, which are condensed in 56 tables that allow comparison of provisions among the states. All the information reflects the most recent data provided to NEA by the retirement system administrators in the 50 states plus the District of Columbia.

Table I shows in what states significant legislation was enacted in each state in the 1979-80 period. Data shown in the table indicate changes in the benefit formula,

non-contributory status, integration with Social Security, survivor benefits, death benefits, disability benefits, *ad hoc* cost of living adjustments, and the makeup of the board of trustees.

Pension provisions

The majority of education systems have 10-year vesting schedules for pension benefits at any age, with Alaska requiring 20 years at any age and Wyoming requiring only four. Ten states will pay deferred allowances to vested members at ages 50, 55, or 60 with a certain number of years of service.

To arrive at final average salary,

Table III Programs and Services¹

System	TSA	Salary Deferral	Life Insurance	Health Care	Publica- tions	News- letters	Annual Statements	Field Counseling	Electronic Funds Transfer
Alabama						40,000	99,999	701	
Alaska			X	X	X	X	X	X	
Arizona					X		X	X	
Arkansas				X	31,300	8,215		31,300	
Calif.	1,277					X	99,999	4,652	
Colorado			28,700		99,999		99,999	X	
Conn.				8,069			47,818	X	
Delaware				X			X		
D.C.	1,994								
Florida					X	X	X		
Georgia				X	X		X	X	
Hawaii			55,638	43,616			44,500	X	
Idaho				1,150			40,000	X	
Illinois						X	X	X	
Indiana						X	67,000		2,450
Iowa					X		190,000		
Kansas			X			99,999	99,999	99,999	
Kentucky	625			12,000	63,000	63,000	48,000	10,000	
Louisiana			1,000				72,000	10,000	
Maine			33,000			2,000			2,800
Maryland	88					1,000	79,013	5	
Mass.								X	
Michigan				40,003	X		X	X	
Minnesota					X	X	X	X	
Miss.		4,607		1,900					
Missouri	100				X	60,000	3,000	X	
Montana	X						X	X	
Nebraska					32,493		24,948		
Nevada					X	X	X	X	600
New Hamp.							34,000	X	
New Jrsy.	X		X	X			X	X	
New Mex.					X		X	X	
New York					X	X	X	X	X
N. Carolina				99,999	99,999		99,999	X	9,000
N. Dakota							10,282		
Ohio	X			X	X	X	X	X	X
Oklahoma	X								
Oregon				35,029	40,645	40,645	40,645	40,645	35,029
Penn.				22,077	99,999	99,999	99,999	99,999	
Rh. Isind.				X	X		X		
S. Carolina		X	X		X	X	X	X	
S. Dakota			4,000	11,000		30,000	30,000	X	
Tenn.					99,999	99,999	99,999	20,000	
Texas					X	X	X	X	X
Utah		X		X		X	X	X	X
Vermont				1,000		10,100	8,146	8,146	
Virginia		X	X		X	X	X	X	X
Wash.							X	X	
W. Virginia	39		46,046	46,046					
Wisc.	1,500				X		X	X	
Wyoming			2,082						

¹The figure 99,999, where shown, represents entire membership.

Source: 1981 NEA Teacher Retirement Provision Survey

24 systems use an average of the highest consecutive years, ranging from two years in Georgia and Washington to three years in nine other states, four years in Illinois and North Carolina, and five years in another 11 states. Twenty-one states use the highest number of nonconsecutive years, with 13 using the highest three years and eight using the highest five. The remaining states have other provisions for arriving at this figure.

Table II shows the normal retirement age and service requirement options in each state. Also shown is the percentage factor used to calculate final average salary, plus any special provisions that apply.

Every state provides an early retirement provision. Most of these require some combination of age and service, with some requiring actuarial reductions based on age at retirement or percent per month re-

duction for each month under normal retirement age. Thirteen states provide for full benefits at a specified age if the retiree has 25 or 30 years of service.

California, Hawaii, Illinois, Kentucky, and Louisiana have flat or fixed percentages of salary that are added to the base benefit each year as automatic post-retirement adjustments, independent of any other condition. The District of Columbia and Maryland apply automatic post-retirement adjustments equal to the increase in the Consumer Price Index (CPI), while 16 additional states apply a flat or fixed percentage to the base benefit if the CPI increases at an amount equal to or greater than the flat or fixed percent adjustment. Eleven other states provide automatic post-retirement adjustments through some other formula.

How death and survivor benefits

are determined among the 50 states is almost as varied as it is complex. In some states, death benefits fluctuate according to whether a service (time) requirement must be filled before they will be paid and whether the cause of death is work-related or accidental. Benefits generally are paid in lump sum only, monthly payment only, lump sum and/or monthly payment at option of survivor, or lump sum and/or monthly payment at option of member. Some of the payment options available to covered employees include a fixed amount; an amount equal to total member contributions, plus interest; an amount equal to 12 months salary not to exceed \$20,000; or an amount equal to member contributions, interest, and employer contributions.

More conditions are placed on survivor benefits, which can be af-

(Continued on page 62)

though the original discount is usually amortized on a straight-line basis for income tax reporting, generally accepted accounting principles require the use of the effective interest method for financial reporting. Thus, charges to the income statement are smaller in early years. The balance sheet, however, is more highly leveraged when DDB's are used than when conventional bonds are used. At the time of issue, the liability is equal to the proceeds, but as the original discount is amortized, the recorded liability increases. At maturity, then, the liability includes deferred interest as well as the proceeds. In contrast, the recorded liability related to a conventional issue is equal to the proceeds only.

Advantages to investor

What type investors are attracted to DDB's? For a tax-exempt organization, DDB's might be a good investment for a number of reasons. First, and especially important to pension funds that rely on matching cash inflows and outflows, investors are protected against an early call by the issuer. Since the bonds are callable only at par, the issuer would realize no interest savings with an early redemption. Therefore, the risk to the investor of having to reinvest at a lower future interest rate is virtually eliminated.

Second, DDB's may provide a favorable guaranteed reinvestment return. Since the investor receives some or all of his interest at maturity (and thus less annually), less of his total return is subject to the risk of being reinvested at lower interest rates in the future. This guaranteed reinvestment return feature can also be disadvantageous if interest rates rise.

Third, DDB's have greater price appreciation potential than current coupon bonds. Assuming equal dollar amounts invested, DDB's are more volatile since relatively more of their investment return remains outstanding for the stated maturity of the bonds. Thus, relatively more of the total investment is subject to changes in interest rates. This feature is unattractive when interest rates are expected to rise.

Disadvantages to investor

Of course, DDB's also have some negative aspects from the buyer's

perspective. The Internal Revenue Service requires even cash-basis investors to amortize the original discount of most corporate bonds annually into taxable income. This results in a very unfavorable tax situation for a taxpaying investor and is the reason original issue DDB's are purchased almost exclusively by tax-exempt organizations. In addition, deep discount bonds inherently yield a lower cash flow and generally carry a lower implicit interest rate than comparable conventional bonds.

Summary

Since DDB's offer some definite advantages to tax-exempt investors, is it safe to assume that the market will be flooded with this type security? Certainly the market for DDB's is potentially huge since tax-exempt organizations (mainly pension plans) purchase approximately 80 percent of corporate debt securities. A major controlling factor on the number of DDB issues will be investor faith. How many companies would you be willing to trust to hold 10 or 15 years of a portion of your interest payments, as well as your principal?

A broker should be able to help decide which companies are worthy of this trust. However, when consulting a broker about DDB's, keep one thought in mind: Some brokers are very eager to sell DDB's. Due to the large discount, the same number of dollars will buy a greater number of deep discount bonds than current coupon bonds. Because commissions are based on the bond's face value, brokers can earn two or three times more selling DDB's.

Original issue deep discount bonds are a welcome addition in the securities market. Although they generally do not appeal to individual investors or other taxpaying entities, DDB's are, for many tax-exempt organizations, an excellent investment opportunity. □

Public Employee Plans:

Benefits in education

(Continued from page 23)

affected by the amount of service a member must have to qualify, the cause of death, and a predetermined choice between death and survivor benefits.

Every state system provides for permanent disability payment for

members after a certain number years of service or below a certain age with a specified number of years of service.

Financing and investments

The vast majority of systems (38) require members to contribute a certain percentage of all earned income from public employment toward retirement benefits. This amount ranges from a low of 3.0 percent in Indiana to a high of 9.5 percent in Missouri, with an average contribution of 6.23 percent. Only Florida, Michigan, New York, Tennessee, and Wyoming do not require members to contribute.

In 23 systems, employer contributions are paid by the state, in 11 they are paid by the local school district, and in 14 they are shared between the two. The amount of contribution varies widely from state to state; it can match the member contribution, be set as a fixed percentage of payroll, be a lump sum, be actuarially determined, or another method. Five states are funded by the pay-as-you-go system, one through terminal funding, three through attained age normal with amortization, three through aggregate, two through individual level premium funding, two through entry age normal interest only, and 34 through entry age normal with amortization.

In its section on investments, NEA surveyed state education systems on such information as their statutory limitations on investments, holdings of the systems, the number of different stocks and bonds in the portfolio, the individual responsible for investing the funds, and the investment counsel firm used, if any. Much of this information was also compiled by *Pension World* and is available in the Ninth Annual Survey of State Retirement Systems (August 1982, p. 35).

Table III shows that programs are available in other categories, as well, in many states. These include tax-sheltered annuities, salary deferral plans, life insurance, health care plans, publications, newsletters, annual account statements, field counseling, and electronic funds transfer. Figures shown in the columns represent the number of participants in these programs as reported by the state systems. □

New tax law mandates pension plan changes

Nearly buried in the multifaceted tax law that squeaked through Congress this summer are provisions that will force amendment of virtually every pension plan in the country. Savings plans and other benefit programs are also affected. All employers will have to cope with new administrative problems. Benefits for the high-paid are especially hard hit.

The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), a broad-ranging revenue raiser, incorporated many aspects of a pension-focused House bill, which was strenuously fought by the pension industry. Fortunately, some of the worst provisions of the original House bill were killed in the process. But enough of the ill-conceived House bill remained alive to cause major problems for pension sponsors and many of their employees.

The most far-reaching of the changes wrought by TEFRA are reduced maximum pension plan benefits, restrictions on loans, and the establishment of greater equality between corporate plans and H.R. 10, or Keogh, plans. Cash-or-deferred annuities (CODA's), which can offer tax advantages to employees, are subject to reduced limits. Maximum early retirement benefits have been slashed. An assortment of less-sweeping restrictions adds to the problems.

Although these provisions are designed to scale back benefits for the highly paid, they will also have an unintended impact on many individuals in the medium-pay brackets, particularly those who retire early. The changes may also reduce employer contributions to defined benefit plans. In the case of some smaller plans, cuts could be substantial. Every employer must now re-examine existing defined benefit

Table 1 Defined Benefit and Defined Contribution Plan Maximum Comparisons

	Defined Benefit Plans Maximum Annual Benefit	Defined Contribution Plans Maximum Annual Addition
1975	\$ 75,000	\$25,000
1976	80,475	26,825
1977	84,525	28,175
1978	90,150	30,050
1979	96,100	32,700
1980	110,625	36,875
1981	124,500	41,500
1982	136,425	45,475
1983	90,000	30,000
1984	90,000	30,000
1985	90,000	30,000
1986 and after	90,000 + increase to adjust for inflation	30,000 + increase to adjust for inflation

and defined contribution plans to ensure that they meet the requirements of the new law and still achieve the goals of the company.

This article analyzes the changes made by TEFRA and their implications for pension plans and other benefit programs.

Reduced maximum benefits

Under a qualified defined benefit pension plan, the maximum permissible annual pension has been reduced 34 percent from the current \$136,425 to \$90,000 in 1983, 1984, and 1985 (or 100 percent of compensation, if less). Thereafter, the maximum will increase by the same index in use at that time for Social Security benefits.

Correspondingly, for a defined contribution plan, the maximum annual addition will be the lower of

25 percent of compensation or \$30,000 in 1983, 1984, and 1985, compared with the current maximum of \$45,475. The maximum will increase thereafter based on a Social Security index.

To see the maximums in perspective, Table 1 shows how they compare for the years 1975 through 1985.

Currently, Social Security benefits are increased by the ratio of the Consumer Price Index (CPI-W) for the first quarter to the first quarter figure of the previous year. However, Congress will probably change this formula within the next few years. Most likely is the use of a wage index.

Maximum early-retirement benefits slashed. Beginning in 1984, the \$90,000 maximum benefit under a defined benefit plan will be actuarially reduced for people who retire before age 62. However, the reduction will not bring the benefit below \$75,000 for employees 55 or older. The maximum is now actuarially reduced only for people who retire before age 55. The interest rate used in determining the re-

by **RICHARD C. MURPHY**
Director of Research
and **HENRY von WODTKE**
Benefit Consultant
Buck Consultants, Inc.
New York, N.Y.

duced maximum benefit must be at least 5 percent.

The law also permits but does not require employers to increase actuarially the \$90,000 limit for individuals who work beyond age 65. In making this calculation, the interest rate used cannot be greater than 5 percent.

Transitional rules. Under the law's transitional rules, benefits already accrued by participants will not be affected by the reductions, except as noted below in the discussion of the new 1.25 and actuarial decrease rules.

A participant's current accrued benefit under a defined benefit plan would be determined as of the end of the last plan year beginning before 1983. In determining the accrued benefit, no change in the plan's terms and conditions after July 1, 1982, will be taken into account. If a participant's current accrued benefit exceeds the new maximum, the accrued benefit will be considered the participant's maximum benefit. No additional accruals will be permitted until the cost-of-living-adjusted \$90,000 limit exceeds the participant's accrued benefit.

An important note of caution here: The law gives employers until 1984 to amend existing plans. But employers should be careful about waiting because they may risk lawsuits by employees entitled under existing plans to benefits in excess of the new limits. If the plan is not amended *before* an employee becomes entitled to the higher benefit, the employee would be justified in demanding the higher benefit even though paying it would jeopardize the plan's qualified status. This potential problem can be solved by amending the plan before the end of 1982 and communicating the change to affected employees.

Funding. Employers are required to continue to fund an individual's current accrued benefit. However, no further accruals in excess of the new maximum limit, as adjusted for cost-of-living increases, will be permitted.

In addition, the new law makes it clear that anticipated cost-of-living adjustments to the overall benefit limits may not be taken into account in determining the allowable deduction for employer contributions to pension plans.

The 1.25 rule: aggregate limit

cut. Another significant change is a reduction of the aggregate limit on benefits provided by an employer with both a defined benefit and a defined contribution plan. Dollar limitations on combined plans have been reduced from 140 percent of the allowable limits to 125 percent. In situations where the percentage limitation results in lower limits than the dollar amounts, the maximum will be 140 percent of the allowable limits. The percentage limits provide that the maximum annual addition to a defined contribution plan fraction cannot exceed 25 percent of compensation, and the maximum benefit under a defined benefit plan cannot exceed 100 percent of compensation. This approach generally preserves the 1.4 limit for the lower-paid, while imposing a 1.25 limit on the higher-paid.

This could have a far-reaching impact on maximum benefits, particularly if the employer offers a very good savings plan and/or cash-or-deferred annuity (CODA), together with a defined benefit plan. Consider, for example, a savings plan with a CODA with the following employer contributions:

3% in CODA deferrals
2% in profit-sharing contribution
3% in matching contributions
8% Total

This 8 percent annual addition represents 32 percent of the maximum allowable contribution of 25 percent of pay (ignoring the fixed-dollar maximum). Under the current rules, annual additions of less than 40 percent of the maximum have no effect on the maximum retirement plan benefit, since a total benefit of up to 140 percent of the combined maximums is permitted.

Under the new rules, this will generally continue to be the case for employees earning less than \$107,142. (This is because $25\% \times 140/125 \times \$107,142 = \$30,000$.)

However, for an employee earning \$120,000, the maximum dollar limits apply, and consequently $125\% - 32\% = 93\%$. Thus, if the defined contribution plan is to be retained as is, then the maximum benefit under the defined benefit plan would be \$83,700 (93 percent of \$90,000) at age 65 and would be about \$70,000 at age 55, but the benefit would be \$75,000 because TEFRA provides a \$75,000 mini-

mum. Also, if the benefit accrued through 1982 exceeds the new limit, no reduction was intended by TEFRA, but the language of the law is not clear on this point.

Transitional rules. Under the law's transitional rules, a participant's overall limit, based on accruals to date, can exceed 1.25 as long as it does not exceed 1.4. However, until the 1.25 test is satisfied, no further accruals will be permitted under the defined benefit plan and no additions, other than investment income and deductible employee contributions, can be made to the participant's defined contribution account(s).

Top-heavy rule. TEFRA establishes new rules for what it calls "top-heavy" plans, which could be either defined benefit or defined contribution plans. The plan is considered top-heavy if 60 percent or more of the present value of the accrued benefits go to key employees. This group is composed of:

- owners of 1 percent or more of the employer company who earn over \$150,000 (not subject to indexing);

- owners of 5 percent or more without regard to compensation;

- officers of the employer (at least three but not over 50);

- any employees who own one of the 10 largest interests in the employer company.

If a plan is top-heavy, the maximum compensation that can be taken into account for setting pension benefits and contributions is \$200,000, which will be indexed. Also, the plan must have accelerated vesting. There must be at least either three-year full vesting or graded vesting. If graded vesting, it must be at least as favorable to the employee as the following:

- One year of participation—0 percent vested;

- Two years of participation—20 percent vested;

- Three years of participation—40 percent vested;

- Four years of participation—60 percent vested;

- Five years of participation—80 percent vested;

- Six years of participation—100 percent vested.

In addition, if the top-heavy plan is a defined benefit plan integrated with Social Security, the benefit for employees, other than key employees, must be at least 2 percent of

pay per year of service, up to a maximum of 20 percent. For a top-heavy defined contribution plan, the employer contribution for employees other than key employees must equal at least 3 percent of pay.

There are special transitional rules phasing in these new provisions on top-heavy plans. Generally, these new rules become effective in 1984.

Even for plans in which the top-heavy rules are unlikely to ever apply, there will probably be a tendency for the IRS to require that language be incorporated into the plan document to assure compliance. This could result in some extensive and, from a practical point of view, silly plan amendments.

Integration of defined contribution plans. The maximum percentage that can be used in integrating defined contribution plans with Social Security is reduced from 7 percent to 5.4 percent, effective in 1984. Although Congress did consider changing the integration for defined benefit plans, it did not do so in TEFRA.

How Keogh plans are affected

One of the apparent purposes of the new law is to make Keogh plans for self-employed professionals more attractive. This is accomplished by achieving parity between the corporate and Keogh plan maximums. Beginning in 1984, Keogh plans are generally subject to the same rules as corporate plans. However, employers now using Keogh plans are more likely than other employers to be subject to the new top-heavy rules.

Impact of changes

The impact of these changes mandated by TEFRA will be substantial for many employers.

Funding. The new defined benefit and defined contribution maximums and the 1.25 rule will affect funding for some employers, particularly those with both defined contribution and final pay defined benefit pension plans. Not only are the limits lower, but the law also adopts the IRS position that a qualified pension plan should not take into account projected increases in benefits above the current maximum when determining contributions. Thus, there could be a reduction in 1983 contributions to de-

finied benefit plans because of the sharp drop in the 1983 maximum.

A second problem is that the annual valuation process will become more complicated. Thus, it will be more expensive for employers whose combined defined benefit/defined contribution maximum is

As part of an overall effort to increase compliance with Federal tax laws and thus increase Federal revenue, the new law requires that income tax be withheld from all taxable pensions and annuities including lump sum distributions — unless the recipient elects out.

affected by the drop in the 1.4 factor to 1.25. Annual additions under defined contribution plans will have to be taken into account in the pension plan valuation. In many cases, this will increase the census data required for the actuarial valuations.

The funding impact will vary by employer, depending on a number of factors. Some employers may want to use long-range funding projections to help determine the best course of action. Employers should also consider the effects of the new laws on their existing plan design.

IRS qualification. Most retirement plan documents will need to be amended as a result of these changes and submitted to the IRS for a determination letter. Since, generally, the provisions of the law are effective for plan years beginning after December 31, 1982, plans with a calendar year plan year could normally wait to make the necessary changes until they file their 1983 tax returns (September 15, 1984, assuming extensions). However, TEFRA permits amendment of plan documents to be delayed until the plan year beginning in 1984. Thus a calendar year plan could delay amendment until September 15, 1985, assuming a tax filing for 1984 on that day.

Design changes. Plan design should now be examined to resolve

possible replacement ratio and funding problems caused by the new maximum limits and to make any other desired changes. Particularly close attention should be given to combinations of defined benefit and generous defined contribution plans because they often will have problems meeting the 1.25 rule.

Supplemental executive retirement plans. In certain companies, there may be many employees whose pensions are reduced as a result of TEFRA. Employers will have to decide whether these employees should be covered by an existing excess benefit or supplemental plan or a new one. It may be necessary to redesign existing supplemental plans because of the additional employees covered.

Covering additional employees would represent a shift from tax-deductible contributions to deferred tax-deductible payments under a non-qualified plan. A material increase in liabilities under a supplemental plan could lead to concern about their handling and about showing increasing unfunded liabilities on corporate financial statements. To solve these problems, the liabilities could be funded in several ways, including corporate-owned life insurance or corporate bank accounts.

New rules for employee loans

The new law permits tax-free loans up to \$10,000 for a five-year period under all qualified plans or tax-sheltered annuities and requires these plans to report loan information to the IRS. Loans for a five-year period for amounts in excess of \$10,000 are permitted on a tax-free basis, provided the total amount of the loan does not exceed half of the employee's vested benefit up to \$50,000. Amounts over these limits will be treated as distributions and subject to tax. Unlike the other provisions of TEFRA, which become effective in 1983, this provision is retroactively effective for loans made after August 13, 1982.

If the loan is made in connection with the principal residence of the employee or a member of the employee's family, repayment must be over a "reasonable" period, which may exceed five years. For this purpose, the employee's family includes the spouse, full or half

brothers or sisters, ancestors, and lineal descendants.

The portion of all loans in excess of these limits must be treated as a distribution to the individual taking the loans. This excess would be taxable up to the amount of the loan transaction, to the extent it exceeds the amount of the individual's nondeductible contributions, if any. For example, an employee who has vested benefits in excess of \$100,000 and has made \$15,000 in nondeductible contributions to a plan, and who has not previously made a withdrawal, could have a five-year loan of up to \$65,000 and not have to pay any tax. However, if a loan of \$70,000 is made to that individual, \$5,000 would be taxable.

Prepayments of loans that were deemed to be distributions will be treated as nondeductible contributions to avoid potential double taxation (at the time of the loan and again when the repaid amount is distributed).

Pension withholding

As part of an overall effort to increase compliance with Federal tax laws and thus increase Federal revenue, the new law requires that income tax be withheld from all taxable pensions and annuities including lump sum distributions—unless the recipient elects out. Notice of the withholding rules and election rights will have to be provided to participants. After participants have made their elections, they must still be given annual notices of the right to change their elections, but further elections are not required.

This provision, which is effective January 1, 1983, will significantly increase administrative costs of plans. It will require plan administrators to calculate the withholding, keep track of who has elected out, and make additional reports to the IRS.

Other changes

The new law also makes many other benefit-related changes to raise Federal revenue and decrease expenses. These include:

Group term life insurance. Beginning in 1984, employer-provided group term life insurance programs may not discriminate in favor of high-paid employees or officers. If they do discriminate, the life insur-

ance coverage is considered taxable income to the employee. If the insurance programs do not discriminate, coverage up to \$50,000 continues to be tax-free. Presumably, salary-related life insurance programs that provide benefits on the same basis for all covered employees will generally be considered nondiscriminatory. The IRS will probably provide some guidance about this and about any special procedure for getting IRS determinations of whether a particular life insurance plan would be considered discriminatory.

Medicare changes. TEFRA shifts Medicare costs to the private sector for active employees age 65 through 69, as well as for their dependents. Medicare becomes the secondary payor and the employer's health plan the primary payor. Together with new restrictions on reimbursing hospital and related health care charges, this shift of primary coverage places a greater cost burden on the employer. The new law also mandates Medicare coverage for Federal employees. Thus, beginning in 1983, these employees and the Federal government will pay Medicare taxes.

Medical and casualty deduction. The nondeductible floor for medical expenses was raised from 3 percent to 5 percent of adjusted gross income. The separate deduction of \$150 for health insurance premiums without regard to the floor was eliminated. The additional floor for drugs was eliminated starting in 1984, but only prescription drugs and insulin will be deductible.

Casualty losses will be deductible only to the extent they exceed 10 percent of adjusted gross income vs. the \$100 floor now in effect. Casualty losses smaller than \$100 continue to be nondeductible.

Federal Unemployment Tax Act (FUTA) changes. Effective in 1983, the Federal unemployment tax base will increase to \$7,000 from \$6,000 and the tax rate will increase to 3.5 percent from 3.4 percent. In 1985, the Federal tax rate will be increased to 6.2 percent (a permanent tax of 6.0 percent and an extended benefit tax of 0.2 percent), and the credit that employers receive against the tax will be increased to 5.4 percent.

Annuity contracts. The taxation of annuity contracts will be modified beginning in 1983. Withdraw-

als will be taxable to the extent income from investment has been earned. The new law also has a rule for treating loans as distributions, as well as a 10 percent penalty for withdrawals before age 59½, or 10 years from the time of contribution, whichever period is shorter.

Universal life insurance. Guidelines are set for the proceeds from universal life insurance to be eligible for the income tax death benefit exclusion.

Disabled employees. An employer may provide additional contributions to a defined contribution plan on behalf of disabled employees (other than officers, shareholders, and highly compensated individuals), based on their pre-disability compensation. These additional contributions are permitted, provided that the covered employees are immediately vested in their accrued benefit derived from these contributions.

The ramifications of TEFRA

The Tax Equity and Fiscal Responsibility Act of 1982 rivals ERTA in its impact on employee benefits. TEFRA is likely to cause reductions in contributions and increases in administrative costs. The use of CODA's is likely to continue increasing substantially, together with defined contribution plans. Virtually all defined benefit and defined contribution plans will need revision. In addition to pension plans, medical and group life insurance benefits are affected.

As an immediate response to the new law, employers will want to study their pension plans very carefully. In some situations, it will be advisable to redesign and revise without delay. Other changes can wait. When making the changes required by TEFRA, it may be advantageous to address other matters. For example, to comply with IRS regulations, actuarial factors used to determine benefits could be specified in the plan.

In short, this is a propitious time for plan sponsors to examine the pension forest, as well as the trees. Rather than simply pruning a limb here and there, it would be wise to review the entire pension plan, not only to comply with relevant rules, but also to ensure its design still meets overall company objectives with maximum cost-effectiveness. □